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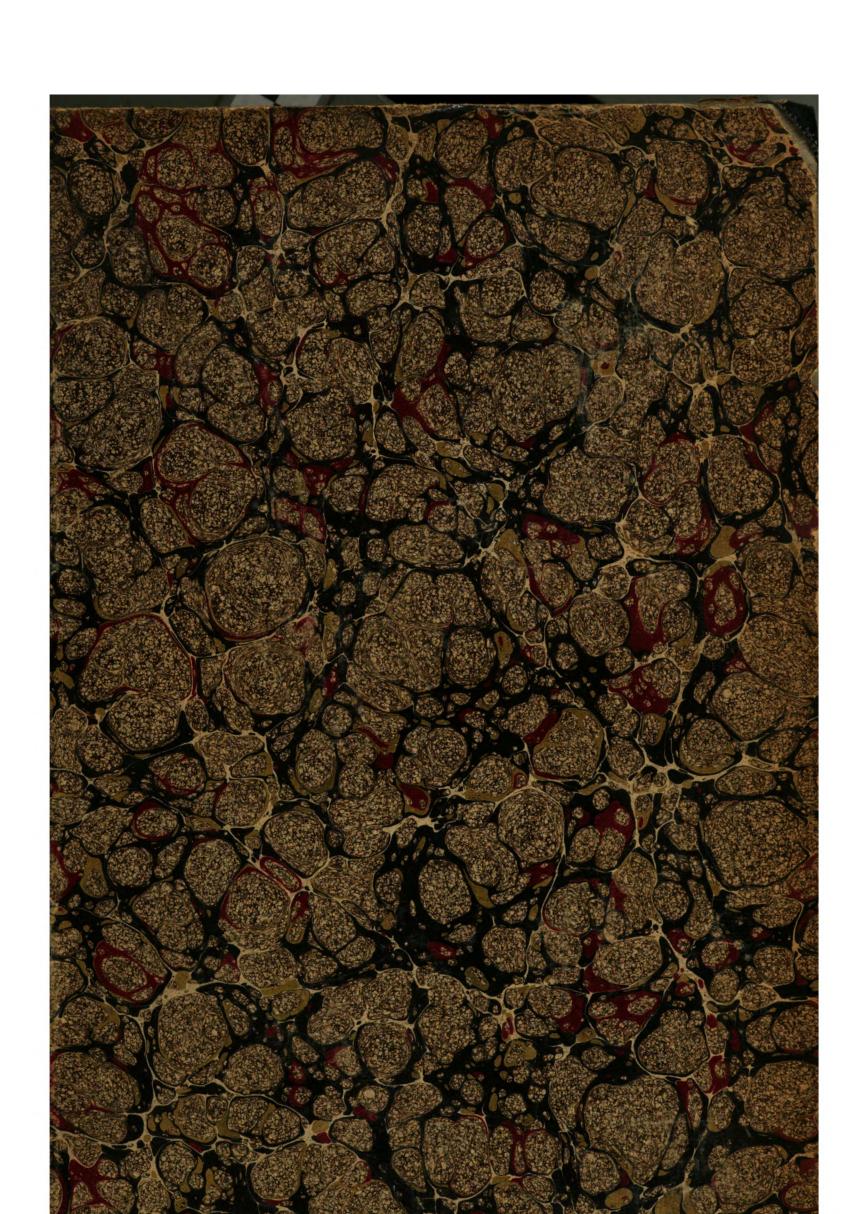
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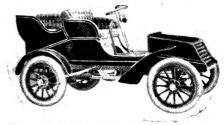
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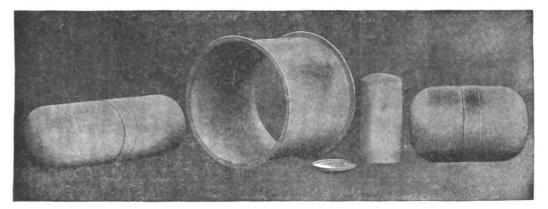
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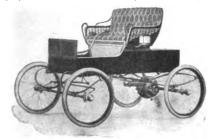
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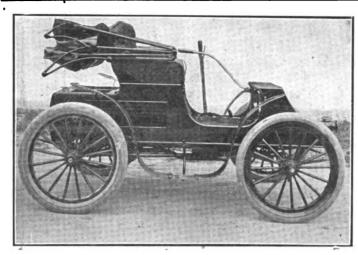
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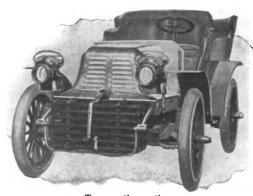
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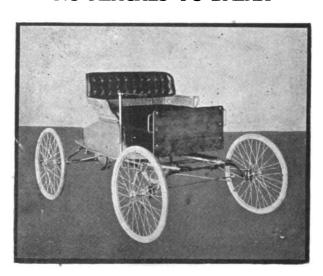
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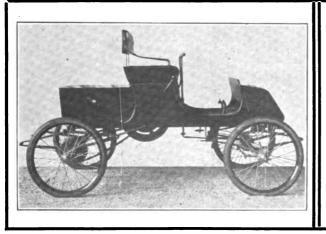
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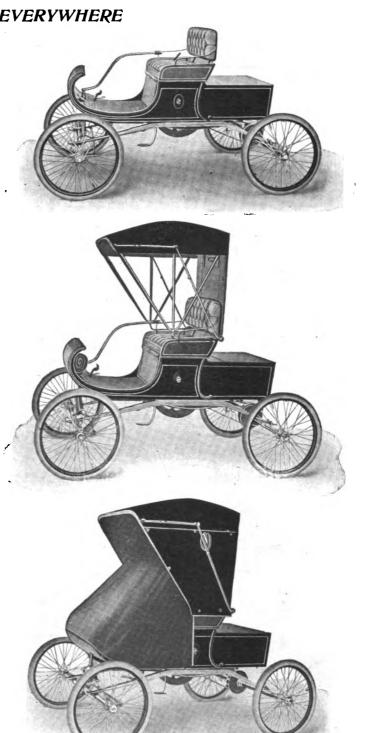
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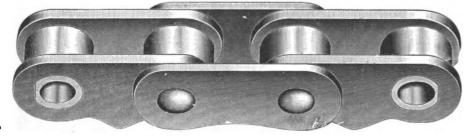
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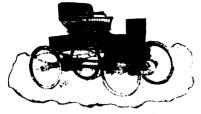
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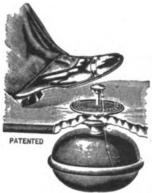
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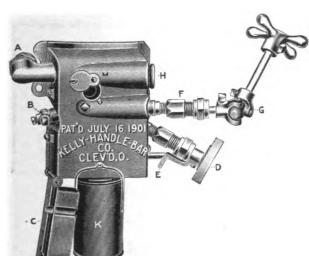


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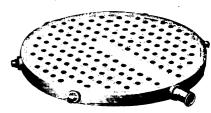
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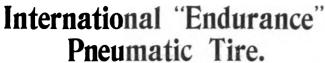
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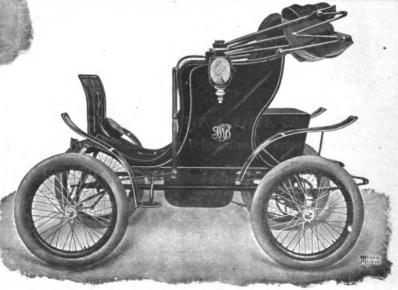
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A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, April 3, 1902.

No. 1.

RACING CONTROL RESIGNED

Is Turned Over to American Automobile Association by New York Body.

At the first meeting of the Board of Directors of the American Automobile Association, held at the rooms of the Automobile Club of America, this city, on Tuesday, the control of automobile racing in this country was formally turned over to the first mentioned organization.

The transferral marks an epoch in the history of racing. Almost from the beginning of the sport the Automobile Club of America has exercised control. It now turns it over to an organization that is, apparently, eminently fitted to conduct it wisely and well.

Although the constitution of the American Automobile Association contains no reference to racing, an omission that was commented on, it was well understood that it would take the matter in hand when the proper time came. It is understood that the much criticised racing rules of the New York organization, which were turned over to the A. A. A., will come in for a needed revision. They were based upon the rules of the Jockey Club of France, and have justly charged against them many errors, both of omission and commission.

President Scarritt of the new association was in the chair. Messrs. Jefferson Seligman, treasurer, and Albert R. Shattuck, Automobile Club of America; A. R. Pardington and Frank G. Webb, Long Island Automobile Club; Dr. Julian A. Chase, Automobile Club of Rhode Island, and Mr. Frank C. Lewin, Automobile Club of Philadelphia, were present.

The racing question had to be met at once, Mr. Scarritt said, as clubs throughout the country had written the Automobile Club of America for sanctions and rules. The latter club already had practically resigned racing control, and the association's committee on plan and scope reported that it had adepted the club's racing rules after amendments to suit altered conditions. This action was rat-

ified and it was decided to have copies of the new rules printed at once for circulation among automobile clubs.

The president was directed to send to clubs eligible to membership a statement of the plan and objects of the new national body. It was decided that highway, legislative, technical, membership and auditing committees should be appointed and that their chairmen should be members of the board of directors.

Staten Island now Favored.

During the past week Chairman Bostwick of the Race Committee of the Automobile Club of America continued his search for a suitable road upon which to hold the club's mile trials, set for May 31. Such a road was found on Staten Island. It is a smooth, level road, and, in company with Secretary Butler and a surveyor, Chairman Bostwick made a thorough examination of it. It was found entirely satisfactory, and if the permission of the local authorities can be obtained it is altogether likely that this course will be selected.

Helped Highways a Little.

Although the \$20,000,000 good roads appropriation in this State proved to be too big an undertaking to carry through at the session of the Legislature just ended, some good in the direction of highway improvement was accomplished. The yearly appropriation was increased from \$600,000 to \$800,000, which means \$1,600,000 to be expended on highway improvement during the year; for the counties, to secure a share of the appropriation, have to raise an equal amount.

New Succeeds the old.

F. A. Babcock has purchased the fixtures of the Buffalo branch of the New York Electric Co., No. 240 West Utica street. Mr. Babcock states that a company has been organized, in which certain well known Buffalo capitalists are interested, to open an automobile station in the premises at No. 240 West Utica street.

The North African Automobile Club has been formed at Algiers.

NICE-ABAZZIA ABANDONED

Hostility of Italian Authorities Develops Suddenly —Can't Race Through That Country.

Now it is the Nice-Abazzia race that has been declared abandoned. Drastic and quite unexpected action on the part of the Italian Government is the cause of this sudden action

Under date of to-day (Thursday) the Herald's European edition gives the facts. It says that "Yesterday the Prefect of Coni, the last stage on the way to Turin, issued a decree forbidding the race on territory under his jurisdiction.

"French automobilists held an indignation meeting in Turin and sent a telegram to the Premier requesting him to annul the Prefect's decree.

"Instead of doing so Signor Zanardelli went further than the Prefect and forbade the race on the whole Italian territory."

The seriousness of the present blow will be understood when it is known that although the course traverses three countries—France. Italy and Austria—probably four-fifths of the entire distance is in Italy. Owing to the express prohibition of the French Government against racing in that country, it was intended to proceed as tourists from Nice to the Italian frontier, at which point the race would start.

The Herald concludes by saying that "the race is thus definitely killed"—a statement which is probably quite within bounds. The start was to have been made on Tuesday. the 8th inst., and the time remaining seems all too short to make any change.

It is noteworthy that the Automobile Club of Great Britain recently took occasion to censure one of its members for "inconsiderate driving." A few examples of this sort would be pretty certain to result in an improvement in this respect, no matter what the club might be.

An automobile 'bus line is projected to run between Lewistown and Harlowton, Mont,



NICE-ABBAZIA

This Year's Events Will Give Much New Data Owing to Stricter Rules.

French Bureau Motor World,

2 Rue d'Abbeville.

Paris, March 21.—The forthcoming Nice meeting and the events to be held in connection therewith are attractiting a good deal of attention just now, and probably no event has been looked forward to with more interest than the race which is to be run off between Nice and Abbazia.

It is interesting because it will mark an entirely new development in the construction of racing vehicles. Being the first race organized under the new rules limiting the weight to 2,200 pounds, automobilists are anxious to seee what makers are able to do in the way of getting powers into the new vehicles, and, from what can be learned about the carriages, it would seem as if manufacturers were entirely successful in keeping up their motive powers, for most of the big racing machines will be propelled by motors of 40 and 45 horsepower. As the power is not sacrificed and the vehicles are lighter, it may be taken for granted that they will be faster, but, apart from the advantage as to weight, the efficiency of the motors themselves has been greatly increased, so that the vehicles are supposed to be much more speedy than those running in previous races.

Of course, we cannot look for such high speeds in Nice-Abbazia as were attained in Paris-Berlin, since the roads through Italy are not very good, and are often thoroughly bad, and the new regulations which oblige competitors to carry out all repairs, fill up tanks, lubricate, etc., on the road will naturally still further lessen the average speed. Nevertheless, the race will be more than usually interesting, not only on account of the new vehicles, but also as a means of giving an idea as to the respective merits of the carriages that are to compete in the Paris-Vienna event in June next.

MAXIMUM POWER WITH WEIGHT LIMITS.

Probably never before has there been so much doubt hanging around the racing vehicles. As we have said, the new regulations have compelled makers to more or less modify the design and construction of their carriages so as to get the maximum possible power within the limit of weight assigned to them, and they thus find it necessary to exercise all their skill and accumulated experience to get the desired result. Even in the leading vehicles there are important constructional changes, about which very little is known at present, and the coming race will be much in the nature of an experimental test, when makers will be able to

see how the new carriages will behave, and thus give them valuable indications for the vehicles to be built for Paris-Vienna. Many of these vehicles are already constructed and are more powerful than those running at Nice, the powers in some cases going up to 60 horsepower, which is equal to about 75 effective horsepower. This is a remarkable result in vehicles weighing less than a ton, and would scarcely have been deemed possible a year or two ago.

The Nice-Abbazia race seems to be a very open event. Nothing is known about the new Mors vehicles, but the Panhards promise to be far speedier than any they have previously turned out, and the Cannstatt Daimler Company have sent some 40 horsepower vehicles down to Nice which are creating something like a sensation. These machines are said to be capable of running at from sixty to seventy miles an hour. Mr. William K. Vanderbilt is over here, waiting for one of these vehicles, which he is to drive in the Paris-Vienna race, but whether it will be of the same power or will have a bigger engine we cannot yet say. The Mercedes are strongly fancied by a great many people for the Nice-Abbazia event, so that, as things stand at present, it seems a very open thing for the Mercedes, Panhards and Mors. There are many new types of carriages that are favorably spoken of, and, altogether, it is not improbable that the race will produce a good many surprises.

HOW THE TIRES WILL BE TESTED.

Another interesting feature about the forthcoming events is the method to be adopted for testing the tires. In this respect the new regulation prohibiting the changing of tires except on the road have done a great deal of good, since it has put an end to a very absurd system of advertising performances which do not throw the slightest light upon the qualities of the tires.

In past races the tires have always been changed at the end of each run, when they were put up in the storage yards, and the success of a maker has depended upon inducing as many competitors as possible, by the offer of prizes, to use his tires, and arranging to change them, not only at the end of each day's run, but also at different points along the road, in the event of punctures. Each maker had an army of men and several hundreds of tires, to be in attendance on competitors, so that in a four days' race each competitor would have used at least four sets of tires, and some of them a good many more. Under these circumstances the publicity given to the tires was misleading, because, at the best, each set was not used for more than a hundred miles.

In future races all repairs and changes of tires will have to be carried out on the road, and competitors will thus have every interest in using them until they puncture or wear out. The race will thus be a real test as to the durability of the tires. The makers now propose to profit from this test by placing them under official control and mark-

ing them in such a way that it will easily be seen whether the tires go through the race without being changed. There has been some little difficulty about marking the tires to prevent their being taken off the rim without its being observable, but one firm claims to have discovered a satisfactory system of sealing the tire to the rim with an official mark, and it will probably be adopted in the race next month.

THE PROGRAM IN FULL.

The programme of the Nice events will be introduced by a test of industrial vehicles. which will start from Paris on Wednesday next, and are due to arrive at Nice on April 6, the day preceding the famous hill climbing test at La Turbie. On the 8th the start will be given to the vehicles for the Nice-Abbazia race. They will traverse French territory and proceed to Coni as tourists, and will then race on to Turin. The second stage will be to Padua, and, after remaining a day at Venice, the vehicles will resume the race to the Austrian frontier, and then go as tourists to Abbazia. Two days will be given up to fêtes at Abbazia and Fiume, and the return journey will take place over the same course. On arrival at Nice there will be an exhibition of the vehicles, and the programme will conclude with the mile speed test on the Promenade des Anglais, as well as the inevitable procession.

Invented by Heron, of Alexandria.

It is now well known that the supposed miraculous utterances of the ancient Grecian oracles, the voices issuing from the statues of the gods, the movements of their arms, etc., were really due to the clever work of the priests. The latter worked wires, speaking tubes and such things, and from long practice became adepts at the game.

How far they carried these practices is shown by the invention of what may, without any very great stretch of truthfulness, be termed an automobile-probably the first on record. This was the self-moving shrine of Bacchus, the invention of Heron of Alexandria, who describes it in his work on automatic mechanism. The shrine in question was mounted upon two supportitng and two driving wheels. On the axle of the driving wheels was a drum, about which was wound a rope, which passed upward through the space on one side of the shrine over pulleys, and was fastened to the ring of a ponderous lead weight, which rested upon a quantity of dry, fine sand. The escape of this sand through a small hole in the middle of the floor of the compartment containing it allowed the lead weight gradually to descend, and by pulling upon the cord caused the shrine to move slowly forward in a straight

Heron describes the method of arranging and proportioning the wheels in case it was desired that the shrine move in a circular path. He also shows how the shrine can be constructed to move in straight lines at right angles to each other.



CHOSES THE COCKS

Governor Affixes his Signature to That Measure —Doughty Bill Still Effective.

No great length of time was required by Governor Odell, of this State, in determining whether he would approve the Cocks bill or its friendly rival, the Robinson measure. The final passage of the former took place on March 22, and on March 28, less than a week later, the Governor affixed his signature to it, making it a law.

The Governor's action does not end the uncertainty that has prevailed, however, or make the lot of the automobilist in this State a pleasant one. The Cocks measure, which took effect upon its being signed, does not misplace the Doughty law, the one under which motor vehicle users have been operating during the past year. That law is still in force, and the Cocks law is merely supplemental to it.

Under the Doughty law fifteen miles an hour is the maximum speed allowed in the country; the Cocks law makes it a misdemeanor to exceed twenty miles. This distinction was clearly pointed out by Chairman G. F. Chamberlin, of the law committee of the Automobile Club of America, yesterday afternoon in a conversation with the Motor World representative.

"A man may exceed a speed of fifteen miles in the country, and in such case he will be amenable to the local authorities," he said. "But it will be necessary to bring a civil suit against him to obtain a conviction, and experience shows that this is surrounded by almost insurmountable difficulties. If he exceeds twenty miles, however, he comes under the Cocks law, and will, upon conviction, be adjudged guilty of a misdemeanor.

"There is another very important matter that is yet to be settled," he went on. "That is whether the mere assertion of a policeman, quite unsupported by any proof, and depending entirely upon the ability of that policeman to correctly judge pace, is sufficient to secure a conviction. That is certain to come up before very long."

The Cocks bill in its original form was a very drastic one. It was introduced by Senator Cocks, who lives in the centre of the Long Island riding district that has been so infested with speeding automobilists. He took a section of the Penal Code making it a n:isdemeanor to run horses on a public highway, and added to it a clause including automobiles which exceeded eight and fifteen miles an hour in towns and in the country, respectively. After a long fight the automobile interests succeeded in having the bill amended and materially modified. The speed in the country was extended to twenty miles and the punishment for infractions of the law made less severe.

The new law is as follows:

To amend section 666 of the Penal Code in

relation to the use of automobiles or motor vehicles on highways.

Section 1. Section 666 of the Penal Code is hereby amended to read as follows:

Sec. 666. A person driving any vehicle upon any plank road, turnpike or public highway, who unjustifiably runs the horses drawing the same, or causes, or permits them to run, or who drives or operates an automobile or motor vehicle, whether the motive power of the same be electricity, steam, gasolene or other source of energy, upon any plank road, turnpike or public highway within any city or incorporated village, at a greater rate of speed than is permitted by the ordinance of a city, or upon any plank road, turnpike or public highway outside of a city or incorpo-



R. A. HOLDEN Jr..

President Cincinnati Automobile Club

rated village at a greater rate of speed than twenty miles per hour, or upon any bridge at a greater rate of speed than four miles per hour, is guilty of a misdemeanor, and shall be fined for the first offence not exceeding the sum of \$50, and for the second offence not exceeding \$50, or by imprisonment for a term not exceeding six months, or both.

London's Automobile Show.

It is expected that more than two hundred exhibitors will be represented at the forthcoming British automobile show which is to open on April 19 at the Agricultural Hall, London, and that it will be the most representative display ever seen outside of France. Not only is all the ground space of the hall booked, but the minor hall will contain a collection of vehicles for heavy traffic. In the gallery will be a show of cars, parts, accessories, etc., while a display of motor garments will also be made.

The Week's Exports.

Mexico—3 cases auto vehicles, \$1,450.
British East Indiese—8 cases auto vehicles, \$1,200

London—34 cases motor vehicles and parts, \$21,934.

IS ON AGAIN?

Paris-Vienna Race may be run After all — Bavarian Opposition Exists.

From the mass of information, some of it contradictory, obtainable regarding the Paris-Vienna race, the most definite statement it is possible to make is that the race will probably take place—at least, it has not been abandoned.

M. Ernest Cuenod, the vice-president of the Swiss Automobile Club, is in receipt of a second cablegram, this time from the president of the Automobile Club of France, stating that the race will be run. M. Cuenod also finds, upon a more careful reading of his first message, that an error in translating one of the code words changed its sense. It stated that trouble in obtaining the necessary permission from the Bavarian authorities was being experienced; but it did not say that on this account the race was off.

As lending support to the belief that the race will be carried through, the Herald prints a story from Paris purporting to confirm the dispatch of a few days earlier, the latter stating that nothing was known in Paris of its abandonment. But up to this writing no clear cut and unequivocal denial of the stories has appeared.

It is possible that secrecy is being preserved in Paris with the purpose of overcoming the obstacles in the way before making a definite announcement. It is well known that such opposition was encountered in both Switzerland and Bavaria, while as to France it is intended to start the race from the frontier unless permission is obtained from the French Government, which is not very likely.

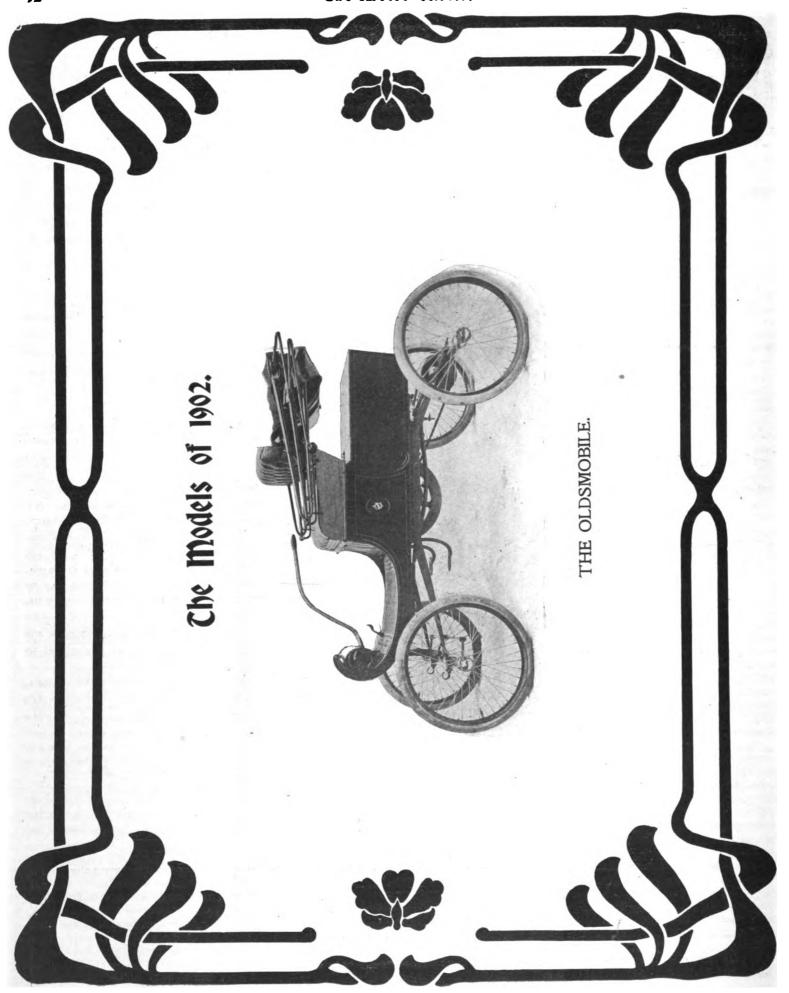
Rhode Island Smokers and Talks.

The first of a series of smokers was given on Saturday last at the rooms of the Rhode Island Automobile Club in the Crown Hotel, Providence, R. I. Two others have been arranged for. The first is set for Tuesday evening, April 8. Thomas McGowan, one of the experts of the Standard Oil Company, will address the club then on the uses of naphtha. The next will be April 22, when Hiram P. Maxim, of the Westinghouse Electric Company will talk on "The Sparking of Gasolene Vehicles." The usual programme of music and refreshments will be furnished on these occasions.

Accident Statistics.

An empty barrel makes more noise than a full one, declares the old saw, and it will not do to suppose that the automobile is the destructive road monster that it is pictured. A French statistician has figured it out that 82 per cent of the road accidents in that country are due to horse drawn vehicles; 8 per cent to railways, 5 per cent to bicycles and 5 per cent to automobiles.





The Motor Morid.



Published Every Thursday

By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING.

154 Nassau Street. NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Leaden Office, 53 Fleet Street, Paris Office, 2 Rue d'Abbeville,			
Subscription, Per Annum [Postage	– Pa	d)	. \$2.00
Single Copies [Postage Paid] .			10 Cents
Fereign Subscription			. \$3.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, at not for advertisements. Checks, Drafts and Money Orders needs be made payable to THE GOODMAN COMPANY.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy serefor is in hand on SATURDAY preceeding the date of

Those who are interested in motor vehicles will find the

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N. Y. Post Office, November, 1900.

NEW YORK, APRIL 3, 1902.

On With the Crusade?

If you have a friend on the police force whom you would have earn "fame" for himself, urge him to "run in" a few automohilists

If you have a friend on the bench, urge him to not only fine but to roundly berate and insultingly denounce the automobilists as they are brought before him.

If you have a friend in an editorial chair, urge him to laud the policeman and the magistrate and to dip his pen in vitriol or nitro-glycerine and then jab it deeply into automobilists generally, turning it around the while.

Many policemen, judges and editors will not require the urging. They have already taken the "cue." But the slower thinkers should be urged not to miss the glorious oppertunity. It is now the fashion to "sail into" automobilists, and no policeman,

magistrate or editor who has the slightest pretentions to uptodateness can afford to remain idle or silent. They may as well be out of the world as out of fashion.

'The "fashion" was set by the "yellowest" of all "yellow Journals." It "roasted" the automobilist so roundly and so often that the sizzling convinced many people who had never thought of it before that their lives were imperilled by the very picture of an automobile. The "snorting demon" suddenly became a menace to the man, woman and child, not to mention goats, dogs, horses and barnyard hens. Your automobilist cares not for them or any of them. He "whizzes" and "thunders" along without regard to anything on, above or below the earth. A few killings per day are mere nothings to him. He is simply an arrogant, unthinking, lawbreaking aristocrat who fancies the roads were made for him, and who would run down and maim or murder the "common peepul" without a qualm of conscience.

As a common enemy, therefore, he should be given short shrift, and when corralled should be treated worse than a thief or a drunken bum. When in his "mad career" he is haled to court his word should be considered unworthy of belief. He should be so informed in the most abusive language the Court can command-the more abusive the better-and if the judge can find time he should commend the truth and zeal of the police; if he can throw in a little speech for the benefit of the reporters, so much the better. It will in all probability reach the editor, who in due course will congratulate the Court.

This is now the usual course in and around New York. We describe it in some detail for the benefit of other communities in order that the "wave of indignation" may sweep the country and spend its force in the shortest possible time. The automobilist has "no show" nowadays, and he may as well realize it. The "crusade" is on, and it is not for him to say nay. He must simply grin and bear it.

We are not defending scorching, but we know that it is not so general as the press would have the public believe. Not a few of

the arrests that have been made have been open to question.

The press is making a mountain out of a molehill and playing on the fears of the people. As evidence we commend to general notice that despite the "dreadful danger" of the "whizzing Juggernaut" accidents are few and far between, and that of sixteen fatalities in this city all but two were due to comparatively slowgoing public conveyances, and of the two that may be charged to "whizzers" one was caused by a horse which dragged its dismounted owner in front of the vehicle.

We do not expect cold facts like these to have any influence, however. It is the fashion to cry out against automobilists, and while fact will ultimately triumph it has small chance while fashion is in full sweep.

Name Counts for Much.

"What's in a name?" the great poet asked, implying that it mattered very little what the name was. But there is a great deal, else Legislature would not be called upon so frequently to confer upon grievously afflicted persons permission to change their cognomens to others more to their liking.

The timid would-be purchaser of an automobile, who turns in horror from the suggestions that he buy a "gasolene" vehicle. will cheerfully assent to a steam one, remarking with a relieved air that is more like it; for his part, he adds, he has no use for gasolene. Later, when he has acquired wisdom, he smiles at his former misplaced apprehensions.

"Hydro-carbon" is a mild and inoffensive name for the vehicle which is most widely known as a gasolene machine. There was a time when the former term applied to it extensively, and it aroused little suspicion of what was really back of it, but that time is passed.

'Explosion" engine or motor is little if any improvement on "gasolene." It sounds just as dangerous, and is no better liked. Besides, it is misleading. It suggests gunpowder, dynamite, guncotton or other highly dangerous substances, rather than the burning of an inflammable product like petroleum.

The old term, "internal combustion" motor is much more to the point. Its meaning is explicit, and it is comprehensive. It does not send the shivers up and down the back of the timid purchaser, or conjure up any visions of terrible things that might happen if anything went wrong.

Yet internal combustion motors are rarely spoken of nowadays, and more's the pity.

In a Circle.

A rather widespread misapprehension appears to have arisen in regard to the legal speed of automobiles in the "built up" portions of Greater New York. It is assumed in many quarters that since the Cocks bill omits any reference to the "built up" sections, that the clauses relating to the latter are no longer in effect.

Such is very far from being the case. In one of its earlier forms the Cocks bill made the omission noted above and coupled with it the words "eight miles" as the legal rate in cities and towns. That was amended, however, and while "built up" does not appear in the measure as signed, neither do the words "eight miles." Instead the reading is that it is a misdemeanor to exceed the legal rate in cities and towns as established by ordinance.

It all depends, therefore, on what the local ordinance says. In this city it is proposed to make the speed rate under it ten miles an hour. Furthermore, if this new ordinance should contain the "built up" clause we will have gone right round in a circle and reached the point we occupied before the Cocks bill became a law.

Expensive Carelessness.

Those who have ever had experience in selling new lines of manufactured goods know that the hardest part of the entire matter is to educate buyers into the correct use and application of such goods as are sold, particularly if these goods are sold as parts. Buyers are prone to blame the makers if anything goes wrong, and look with suspicion upon letters coming from the makers tending to place that blame in the right direction.

While this is the general rule, not always is it a case that the buyer has no just grounds for complaint, nor reason to feel suspicious that there is a dodging of the point at issue in an attempt to uphold a reputation for good goods.

This point of view was recently brought to our attention in the purchase of a carburetter from a well known concern. From the reputation and experience of the maker there was every right to believe that the carburetter was ready to apply without specific inspection of its internal parts.

The Motor World.

Perhaps from curiosity, perhaps from some other cause—the specific reason has nothing to do with the case—the carburetter was taken apart before applying it, and with good fortune, as matters turned out.

The float used in the supply chamber to regulate the level of gasolene was found to be wet with diluted acid used in soldering it together to make it air and fluid tight, and the surfaces were covered with a hardened deposit from this same source. This one item might have been overlooked, as perhaps happening through some peculiar, one-time oversight, but in taking apart the balance of the device, the gas chamber and the throttle chamber, the former was found to have some of that same green deposit from soldering acids, while the latter was thickly coated with a fine, white powder.

It is not a far cry to suppose that some

"We are somewhat agreeably surprised to learn of the widely scattered circulation of the Motor World. Within the past week, we have received replies to our quarter page ad. in your publication from Belgium, India and So. Africa."

NATIONAL VEHICLE CO.,

Indianapolis, Ind.

Per THOMAS HAY.

one not familiar with the theories of carburetters might have received that identical device and applied it without inspection; certainly he would have been warranted in so doing. Had this reasonable supposition been true there need be no stretch of the imagination to picture the results, or, rather, the lack of results, and a consequent condemning of probably everything connected, mo tor and all.

The case here related is not called up to adorn a tale, but to point a moral on the needs of makers of parts to provide the most thorough and systematic methods of inspection. We appreciate that the demands upon those who can deliver goods are at present almost abnormal and that manufacturers are doing much to relieve matters. Under these conditions it increases their difficulties, but well paid inspection will yield returns when the time of greater competition rolls round.

Under these future conditions there will come better understanding of needs, as education will advance along with them, and even a case like the above will not do the harm that it is at present pregnant with. The needs in the case are apparent, and

should be looked to with an eye jealous for the future success of the individual and the industry as a whole.

A Wonderful Saving.

It was a curious objection, and admission, which one speaker made to consumption tests the other night at the Automobile Club of America.

In declaring himself to be opposed to such a test being tacked on to an endurance run, he said that an experienced chauffeur could effect a saving of 50 per cent in his gasolene consumption—on a gasolene vehicle—if he took the trouble to do so. He had accomplished the feat, but it was such an irksome performance that it robbed a ride of practically all its enjoyment.

It was necessary, he said, to keep one's thoughts continually on the matter of consumption. Every change of speed, every hill climbed, every hill descended, must be done with an eye to the saving that it was desired to effect.

For his part, he concluded, this was not his idea of automobiling pleasure; and if he took part in the run he would omit the consumption test.

There is nothing incredible in all this, nothing even very strange. But the great saving it is possible to effect—just one-half—is much higher than we would have been inclined to put it.

Like many other good things, up-to-date automobiling "comes high." As pursued by some of the more ardent motor-vehiclists, it is truly a sport for millionaires. To keep a stable of half a dozen of the most approved types of high powered, high speeded "cars" in commission, with the necessary complement of chauffeurs, mechaniciens, helpers, etc., is a tax on any but the longest sort of a purse. For those not so well provided, however, it is comforting to reflect that expenditures of this nature are not absolutely necessary. A modest little establishment, consisting of one or two vehicles. can be maintained at a cost little if any in excess of that required to keep a horse drawn vehicle stable in commission.

An automobile broke down at the Brooklyn Bridge entrance on a Saturday afternoon recently and interfered with traffic until it was carried to one side. The front axle had broken off short, just inside the wheel hub. We examined the fracture. It showed an ugly flaw, and steel of a very coarse grain. To cap it all, the axle was almost absurdly small in diameter. When will some makers learn to make important parts proof against such mishaps?



From Nice comes the nice little item that the two Americans who have done more to cause dislike and disagreeable laws for the automobile than any and all other men have been arrested for racing through the streets at night, without having taken even the trouble to light the lamps on their vehicle. French law is evidently not so considerate of the comfort of millionaires as American law has heretofore been, and the consequence was that the reckless scorchers, who were none other than than W. K. Vanderbilt, jr., and D. Wolf Bishop, were, according to the cable, allowed to become aware of the Frenchman's dislike to being run down by an American scorcher while they sat in the station house. It would have been a fitting testimonial to the esteem with which these two men are held by their countrymen if upon receipt of the news of their arrest congratulations had been promptly cabled from here to the Nice authorities thanking them for having employed such efficacious methods to teach these two devil may care abusers of road privileges that neither their money nor their prominence permits them to utterly disregard the rights and the safety of others. Unfortunately the cable does not tell what excuses Messrs. Vanderbilt and Bishop offered for their criminal abuse of French road privileges. I am sorry that this detail is missing, because I would like to know what Mr. Bishop said. The last time he was arrested here in New York for a similar defiance of the laws he declared his arrest was brought about by the makers of American automobiles, who were jealous of the fact that he used a French vehicle, which was far superior to any that the Americans could make.

Assuming that Mr. Bishop is still possessed of such extraordinary beliefs as his former explanation of why he was arrested would warrant one in assuming, it must have grieved his tender, law loving soul to find that despite the martydom he had suffered in his own country for his loyalty to the French vehicle that in the very home of that vehicle he was arrested for doing the very same thing he did in New York. Still, it would be just like his modest self for Mr. Bishop to say that the American automobile makers in their malignant hatred of him and his French vehicle had bribed the authorities of Nice to arrest and to confine him in a beastly, vulgar, police station, don't you know!

. . .

But our Bishops and our Vanderbilts need not think they are to have all the glory. Even though they, as the kings of recklessness, are temporarily absent from their home racing grounds, the job of keeping the automobile before the public in an unfavorable manner is in perfectly competent hands. Congressmen Belmont and Ruppert are seeing to it that the life's work of Messrs. Bishop and Vanderbilt does not suffer here merely because the king plns of fast driving have been temporarily inmates of a French police station. No, indeed, the good work of making enemies for the automobile has not been allowed to cease for a single instant, thanks to the lawbreaking ability of the two statesmen from this city. Like those whose labors they have so loyally taken up, Messrs. Belmont and Ruppert were last week arrested by an ignorant policeman, and by him taken to a vulgar station house, where they were charged with a violation of the laws which the city of Washington had found necessary to provide.

For several hours the affairs of the nation were allowed to drift while the two illustrious statesmen sought bail and influence to secure their discharge from their station house residence. This finally accomplished, the affairs of State were once more in capable hands, since Congressman Belmont and Congressman Ruppert were free to attend to it and to carry out their threats of having the stupid policeman who dared to arrest them dismissed from the force for his inpudence. What are things coming to when the "Red Rattler," with the initials O. H. P. B. upon its back and their owner upon its seat, cannot rush past an ordinary policeman at any speed which may please Mr. Belmont without any regard to either the law or its servant, the policeman?

An automobile catalogue should be an automobile salesman. Sometimes, not often, it is what it should be, and many times it isn't. The catalogue should tell a complete story of the vehicle in a convincing way. The salesman himself should not need a catalogue. He is there, the automobile is there, the customer is there. That is as much as any salesman who is worth his salt should need. It is, however, a good thing for the salesman to have a good catalogue to hand to the customer who fails to purchase on his first visit, as most automobile buyers do fail to, but that catalogue should supplement the salesman's efforts. It should tell the same things that the salesman told, and tell them in a plain, sensible and not too technical way. There's almost as much vet to be learned about the way to sell an automobile as there is about how to make or how to use it.

To-day men of wealth and leisure are buying and running automobiles as a pastime—quite apart from any consideration of cost or comparative economy. But neither a large nor a permanent demand can be expected from this source. As soon as the novelty has worn away, the ownership of such automobiles will be cast aside for a newer plaything. The future of the vehicle lays in the way it can demonstrate its advantages to the ordinary citizen. With the ordinary man, then, does the question of automobiling's permanency rest, and he, therefore, is the man to cultivate, encourage and protect. The rich man neither needs nor cares for

any such thing. The influence begotten of his money and his position makes him conparatively safe, but the final arbiter of the new vehicle's fate has only his numbers to protect him, and they are valueless unless they be organized and wielded as a unit. As it is now, both the rich man and the nonwealthy one has his national automibile association, and each will do its share toward hastening the day when even prejudice will have been conquered by the motor vehicle's merit. Before that day arrives, however, there will be only one great organization, and it will be the one which stands for the greatest good to the greatest number, which latter is and always will be the individual owners of motor vehicles. I lay no claim to seventh son honors in predicting this. It is a self-obvious fact which all who do not wilfully close their eyes must see.

I am prepared to subscribe to the statement that the truth should not be told at all times. Not only is this sound advice as to times, but it is equally so as to places. Despite this, however, I believe that the rule should be in favor of truth telling, and only the exceptions-not too numerous ones, either-should be the other way. The advisability of teiling the truth is never more manifest than when it comes to advertising. Advertisements represent goods. The more accurately they represent them the better advertisements they are. Advertising which misrepresents either by exaggeration or by inadequacy is bad advertising. The nearer an advertisement can get to the plain, naked truth the more likely it is to be profitable. Newspaper men understand that unreliability in the way of news is worse than no news at all. Advertisers must learn the same lesson. It is to the credit of the automobile advertiser, as a class, that with every temptation to go in for exaggeration and rainbow hueing, he has steadfastly held close to the line, and conservatism in his announcements has been the rule rather than the exception. The direct result of this has been his prompt winning of the public's favor, with every prospect of retaining it.

The "dry" facts about an automobile or any of its parts or equipment are not dry to the man who contemplates paying out money for their purchase. Gentlemen who make these things and who advertise them please note, and by doing so they will not only please the public, but they will all the more rapidly dispose of their wares.

What's the use? You really can't get within a mile of those British wordsmiths. Where do you think they have got the poor tourist now? Upon a shelf among their other verbal monstrosities, with the label "land yachtsman" stuck on him! Oh, me! Oh, my!

To catch the I is the aim and end of the advertiser of honest vehicles, while the advertiser of shoddy ones is content if he can but catch the J.

THE COMMENTATOR.

ABAZZIA THE ALLURING

Beautiful "Queen of the Adriatic," Turning Point of Next Week's Race.

Abazzia, the turning point of the Nice-Abazzia race, which starts on April 8, has been frequently termed the Nice of the Adriatic. Like the French fashion resort, Abazzia is charmingly situated.

It is made up of beautiful country houses, artistic toy villas, and excellent hotels set in exquisite scenery; the wide horizon of a sapphire, tideless sea stretching out picturesquely beyond the bay. The temperature of Abazzia is wonderfully even, the deadly mistral unknown, and the warm breath of North Africa mingling with the bracing air that blows down from the hills and Monte Maggiore, contrive to make the climate both pleasant and healthy.

The mixture of mountain air with that from the Mediterranean prevents any suspicion of enervation in the climate.

Abazzia is an all the year round resort. It has a good winter and autumn season, and during the summer is a fashionable and aristocratic seabathing resort, much frequented by the Austrian and Hungarian nobility and

The German Emperor and his family made a prolonged stay there in 1894, which further helped to popularize this beautiful "jewel" of the Adriatic.

Abazzia is practically under the administration of the International Sleeping Car Co., who constantly add new attractions and fresh beauties to their property. The hotels are excellent, the cooking and attendance very superior, and the charges by no means extravagant, so that automobilists who want to be in at the "first heat" need have no fear of being fleeced during their stay at Abazzia.

Battledore ane Shuttlecock.

During the past week the police crusade in Greater New York against users of automobiles has become very active. The "tip" appears to have been given out that automobilists are fair game, and so their persecution goes on merrily. Arrests in considerable numbers were made on Sunday last, and scarcely a day passes without at least one victim being landed.

One of the most curious features of the movement lies in the fact that of late it is the outlying districts that are receiving the greatest share of attention. During the week the scenes of the majority of arrests have been remote from the centre of the city.

The theory appears to be that automobilists have become wary on Fifth avenue and other frequented thoroughfares. Some miles out, however, they let out a notch or two, tempted by little frequented streets, and are promptly "nabbed" for their indiscretions. Arrests were frequently made at places ten and twelve miles out in the suburbs, to the great astonishment of most of the victims. In a talk with Chairman George F. Chamberlin of the A. C. A. law committee the

avenue through which relief was expected

and sought was made plain.

"There is now an ordinance before the Municipal Assembly," he said, "introduced by Alderman Oatman, increasing the legal rate of speed in the city to ten miles an hour. If this goes through, or even a more favorable measure, there will be a decided improvement."

Meanwhile the lines have been drawn with a severity previously unknown, and many surprised automobilists are being drawn into the police net so cunningly set.

Reasons for Non-Taxation.

It is well known that automobiles help instead of hurting the roads over which they pass, being in this respect in marked contrast to horse drawn vehicles. Nevertheless, it is a novel contention that such fact should be taken into consideration when taxing automobiles.

The point has been raised in Washington. D. C., however, by an electric vehicle transportation company involving the right of the District of Columbia to impose a license tax of \$10 per annum upon automobiles used for the transportation of passengers for hire in the District.

The company was fined for violating a law passed in 1871 taxing the proprietors of "hacks, cabs, omnibuses, streetcars, and other vehicles for transporting passengers for hire." The defendant company justified its refusal to pay the license tax on the following grounds: Because the electric vehicles are run by electricity and do not come within the classification of vehicles set forth in the act mentioned; because the rates of taxation for licenses, as fixed by the act, are based upon the character of vehicles as determined by the number of horses required to draw them; because the rates are likewise based upon the wear and tear upon the streets and other inconveniences resulting from the use of vehicles drawn by horses thereon, and are inapplicable to electric vehicles, and if applied thereto would be unjust and oppressive, and, finally, because at the time of the passage of the act the conveyance of passengers by means of electric vehicles was unknown and unheard of, and could not have been in the contemplation of the framers of the law.

Conditions of Delivery.

Already the cry is heard that vehicles cannot be procured out of hand. The wise ones placed their orders early, and are now having them filled, while the procrastinators are reaping as they sowed. There is one comfort, however. Unless the season opens with a tremendous rush matters will, for a while at least, get better instead of werse. There are immense quantities of vehicles new coming through the factories, and when they are placed on the market there will be less talk of a scarcity.

TROUNCES THE TRIBUNE

Correspondent Takes it to Task for Non-Progressiveness-Some Comparisons.

"I have become so weary of the editorials in the Tribune denouncing autemobiles and at the misleading statements therein that I am moved to protest," writes an indignant reader to that journal. "It is quite evident that the writer of the recent editorials is the same man who ten years ago came out every day for a year with "the deadly trolley," stating that it could not ever be permitted upon the streets or roads of any civilized community. But the trolley came just the same, and now the Tribune occasionally remarks upon the blessing it is.

"When Stevenson built the first railroad in England the newspapers of the day denounced the project in much the same terms in which the Tribune now denounces the automobile, and declared that if the lunatic wanted to travel at any such awful speed as thirty miles an hour he should be required to erect a fence thirty feet high on either side of the track, so that the residents along the way and cattle in the fields should not be frightened to death.

"The statement in to-day's editorial that 'it is not at all certain' that if the machine may be stopped in twice its length when running at a speed of seventeen miles an hour its occupants would not be shot headlong through space at a flat trajectory shows that the writer never has ridden in a fast automobile and that he is ignorant of the simplest natural laws. I have a machine capable of a speed of thirty miles an hour that I have ridden over ten thousand miles, I have frequently stopped within thirty feet and less when at full speed, and I have not only managed to keep my seat, but, so far as I recall, my wife, who always accompanies me, has never yet been 'shot headlong at a flat trajectory,' or caused any of the damage predicted by your writer. ,

"The Tribune seems entirely to overtook the fact that the vast majority of automobilists in this country are plain, law abiding folk, who are fond of good, healthy exercise. Very few machines are capable of a sustained speed of over eighteen miles an hour, and while there are a few offenders who run their machines at excessive speeds in crowded places, their conduct should not be persistently held up as representing the entire class. I shall be glad to take your timid writer on a ride at any time, and shall be glad to demonstrate all problems in acceleration, retardation, etc., and think that after a ride or two he wili modify his views."

The Porto Rico Transportation Co., which is about to establish and operate an automebile 'bus line between San Juan and Ponce. has also put in a bid for carrying the mails between these points.





The Storage Battery in the Commercial Operation of Electric Automobiles. •



W. H. PALMER. JR.

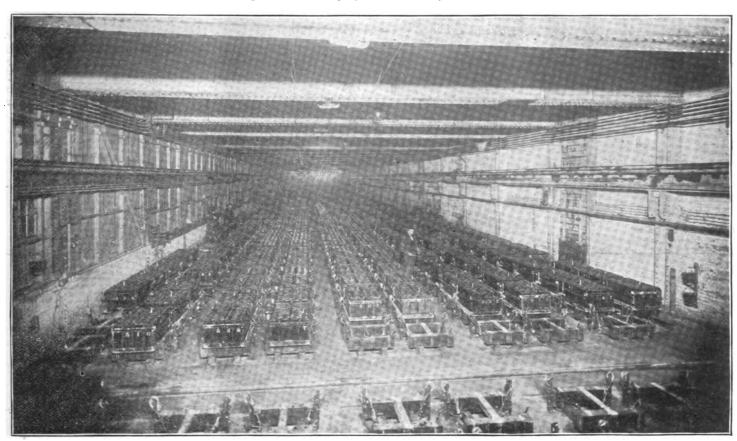
In discussing the merits of the various systems of automobile propulsion the electrically driven vehicle is too frequently dismissed with the arbitrary statement that, although ideal in so far as motor, controlling mechanism, etc., are concerned, it is rendered impracticable for commercial use by reason of the great weight of the necessary storage battery, its unreliability, and the

edge of the conditions surrounding it, the more accurate and interesting should be the conclusions drawn therefrom.

Electric cab service in New York City was inaugurated in the spring of 1897 by the Electric Carriage and Wagon Company, with an equipment of twelve hansons and one surrey. To-day that service, conducted by the New York Transportation Company, has grown to such proportions that upward of

along this line, and the means that have been employed to obtain economy and reliability of operation.

While vehicles of nearly every description are included in the equipment, the operation of hansoms and broughams constitutes the greater portion of the company's business, and the portion upon which accurate figures are most easily obtainable and the statements which follow have been based



HUNDREDS OF BATTERIES, THOUSANDS OF CELLS

great amount of attention which it demands. On the other hand, there are not lacking those who maintain that, thanks to the unremitting efforts of the past few years, the storage battery is, in the special types furnished for automobile work, freed to a great extent from those objections.

Attempts have been made from time to time to collect and publish results obtained by isolated users of electric vehicles, but, as is also true of similar data collected concerning other systems of automobile propulsion, the reports have been so contradictory and impreper conditions so large a factor that the information so obtained has been of little value.

The greater the scale on which operation is conducted and the more perfect the knowl-

three hundred vehicles are in daily operation, running an average of nearly five thousand cab miles per day. That the service performed by these vehicles is successful, from the point of view of the patrons, is shown by the fact that, at rates equal to, or in excess of the rates charged for the highest class of horse livery service, far more applications for service are received daily than the company, even with its increased equipment, is able to accept.

This growth would seem to indicate that, by this company at least, solutions have been found for the various problems encountered—that of the storage battery among the rest.

It is the object of this article to describe briefly the progress that has been made upon the vehicles and batteries used in that service.

About one and a half batteries are kept in commission for each vehicle operated. This number is sufficient to meet the requirements of service, calling for the use of vehicles at all hours, both day and night. Of these, about two-thirds are at present of the Chloride-Manchester type, and one-third of the Exide type—both the product of the Electric Storage Battery Company—one or the other being used, according to the nature of the work to be done by the vehicle.

No batteries of any other type are used by this company. Tests have been made of the other types of automobile cells which have from time to time made their appear-



ance, but none have promised so well as those now in use.

It is of great importance that the batteries used should be the product of manufacturers who can be depended upon to supply promptly and certainly such parts as may be necessary for increases, renewals and replacements. An unvarying standard of quality is also a prime consideration. The characteristics inherent in the batteries in use, which particularly adapt them to the service required, will be spoken of later.

The Chloride-Manchester elements are so well known that a detailed description of them should be unnecessary. The standard brougham or hansom battery of this type consists of forty-four cells of the T V-7 size, having three Manchester positive and four Chloride negative plates. The weight of the battery complete in the tray, with all connecting straps, etc., is 1,790 pounds, and the capacity 108 ampere hours at the three hour rate of thirty-six amperes.

UNSATISFACTORY RUBBER SEPARATORS.

These batteries, as originally furnished, were assembled with corrugated, perforated hard rubber separators between the plates. These separators were unsatisfactory for various reasons. One of the principal sources of trouble was in the tendency of these separators to flatten out, if, during the hot weather of the summer months, the batteries for any reason became slightly overheated. The fiattened portions would then form pockets in which the active material, which is always slowly being thrown off from the surfaces of the plates, would collect, quickly causing partial short circuits, leading to "dead" or "weak" cells, and if neglected to more serious trouble, if not the total loss of the plates. This was partly overcome by employing a "heat proof separator," which, being corrugated before being vulcanized, was much less apt to flatten. These were, nowever, still unsatisfactory. To economize space, the distance between adjacent plates in the cells is necessarily small, and particles of active material frequently lodged in the perforations, forming the nucleus of bridges which gradually built themselves across from plate to plate, or, in assembling or repairing the cells, a careless workman might allow a quantity of lead, melted under the hydrogen flame, to run down between the plates, which, riveting in the separator perforations, would eventually cause a partial short circuit, at once difficult to detect and remove. Moreover, the first cost of the separators was great, and, being brittle, many were broken in the operations of cleaning and repairing the cells, constituting a constant source of annoyance and expense.

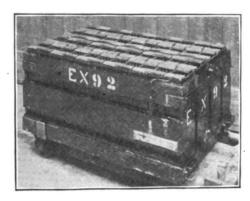
USES WOODEN GROOVED SEPARATORS

The Electric Storage Battery Company therefore set itself the task of providing a substitute for this expensive and unsatisfactory separator, and about a year ago brought out a grooved wood separator, without perforations, which is now used in all batteries of this type, and which is free from all of the above objections. These separators are

one-eighth inch thick, with vertical grooves three-sixty-fourths of an inch deep on both sides. The distance between centres of grooves is one-fourth inch. The width of the separators is equal to and the height one-half inch greater than the corresponding dimensions of the plates. Being without perforations, they form practically a continuous diaphragm between the plates.

Partial short circuits are almost entirely prevented, and in the rare cases where they do occur can be readily removed. Cleaning is necessary at less frequent intervals, and the life and capacity of the elements are therefore conserved and the efficiency increased. The first cost of these separators is small, and with a life of from three thousand to five thousand miles the maintenance cost is very low. These separators do not increase the internal resistance of the cells.

Connection between the battery and vehicle wiring is made by means of copper terminal plates mounted upon the sides of the tray. On the sides of the battery compart-



FULL TRAY OF EXIDE CELLS.

ment in the vehicle are spring mounted contact blocks, which have pressure contact with the plates on the tray when the battery is in position in the vehicle.

The forty-four cells comprising a battery are connected in one series. This is a decided improvement upon former practice, when two and even four series were the rule. The advantage is that only two contacts are required for the single series, as compared with four or eight with the two and four series arrangements. These contacts, consisting of flat plates having upwardly extending lugs, are securely fastened to the sides of the tray. The lugs extend to within a few inches of the terminal cells of the series, to which they are attached by short, solid copper wires. With the two and four series arrangements the contacts and wires were a source of much trouble. With the two contacts and short, stout wires such troubles are rare.

The weight of a standard brougham, with battery, driver and two passengers, is about 5,300 pounds. Such a vehicle, when in good condition, will consume, at the normal running speed on level asphalt, about fifty watt hours per thousand pounds per mile, or 265 watt hours per vehicle mile.

This will be increased if the vehicle is not in good order, if the retardations, because of

traffic, are very numerous, or if the streets travelled over are rough or covered with mud or snow. A fair average for reasonably clear streets has been found to be sixty watt hours per thousand pounds per mile, or 318 watt hours per vehicle mile.

The capacity of the battery at the three hour rate is, as stated, 108 ampere hours. As the average voltage of discharge of forty-four cells at this rate is about eighty-four volts, the watt hour capacity is about 9,072 watt hours. The mileage capacity under average conditions will therefore be 28.5 miles. The weight and, consequently, the power consumption, of the hansom are slightly below these figures, but the difference is not great.

HIGH MARGIN OF SAFETY ALLOWED.

The radius of action indicated by these figures is ample for the bulk of the service which vehicles are called upon to perform in and about New York. It is necessary, however, to allow a relatively high margin of safety to insure reliability, since imperfections in the vehicle, a battery not fully charged or snow covered streets, may materially reduce the mileage capacity. In order, therefore, to care for service requiring greater mileage on a single charge than could be secured from the Chloride-Manchester cells, and also to increase the margin of safety, the Electric Storage Battery Company was asked to submit for trial a battery of higher capacity.

Having anticipated this demand, the manufacturers had for some time been engaged in exhaustive tests of various types and forms of plates, and as the result of this work the first battery of the Exide type was furnished in the fall of 1900.

This battery constitutes a signal advance in the art of storage battery construction.

Presenting to the casual view no distinctly new features, it nevertheless embodies principles never before brought together, and which combine to secure in a greater degree than has hitherto been obtained the three necessary features of a commercially successful automobile battery-high capacity, long life, and, if the phrase be pardonable, a strong constitution; that is to say. freedom from structural weakness and the ability to withstand without serious injury a great deal of neglect and abuse. The advent of this battery has given to the electric automobile industry a renewed impetus. As it is a comparatively recent development, a somewhat particular description of its construction and capabilities should be of interest.

GRIDS ARE OF ANTIMONIOUS LEAD.

The plates are of what is generally known as the pasted or Faure type, consisting of antimonious lead grids or supports pasted with oxides of lead. Both theory and the results of many years of experience have shown that, just as the chemical changes undergone by the active material of the positive plate in the operations of charging and discharging differ from those undergone by that of the negative plate, so, in order to

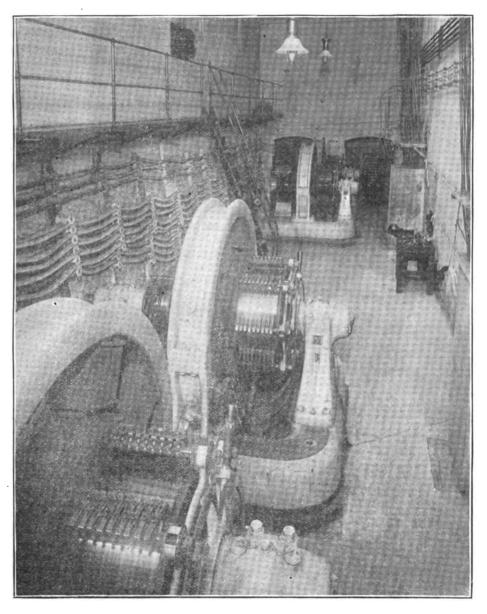
secure the best results, the distribution and mode of supporting the active material of the one should differ from those of the other. This principle has been recognized in the design of the Exide battery as it has not been in any previous form of the pasted type of cell.

In previous forms both positives and negatives have been of the same general construction; in the Exide battery they are radi-

forations are made from one side and half from the other, so that after the operation is completed both sides are thickly studded with these little hooks.

Both sides of this grid are then pasted with litharge. The paste is held to the grid by the little hooks and is also riveted through the perforations, giving all portions of the mass a tenacious hold upon the support and upon each other. There are no iso-

of the plate and which are connected by small bars having a triangular cross-section, the base of the triangle being at the face of the plate. These connecting bars on one face are staggered with those on the other. This grid is pasted with red lead and formed in the usual way, the thickness of the finished plate being seven-thirty-seconds of an inch. The active material is in the form of continuous pencils, of rectangular



FOUR OF THE ROTARY CONVERTERS.

cally different, that construction having been adopted for each which experience has proved to be the best.

The negative plate consists of a grid made of an antimonious lead sheet, around which a frame of sufficient weight to secure the necessary stiffness and strength has been cast. The body of the sheet is filled with perforations, evenly spaced at small intervals. These are made by a tool which does not remove any material, but instead tears its way through, leaving numerous small clawlike projections around each hole, which are curved back toward the sheet, forming a series of hooks. Half of the per-

lated pellets to shrink and drop out, no large masses pasted against a flat surface to scale off, and but little of the support exposed, leaving the whole of the faces of the plates active and giving a maximum rate of discharge per unit of area. The distribution of the mass of active material is nearly ideal. Being applied in a thin layer, all parts of it are close to the current carrying support and in a position to give maximum capacity per unit of mass. The thickness of the finished plate is three-sixteenths of an inch.

The grid of the positive plate is of the "cage" type, consisting of thin vertical ribs, the edges of which are flush with the faces

cross-section, extending from the top to the bottom of the plate. The thin flat ribs are on two sides of the pencils and the triangular cross bars are embedded in the other two sides, which constitute the faces of the plate. The design of the grid gives a maximum of strength and stiffness with a minimum of weight. The continuity of the material combined with the cross bars holds it firmly in place, while at the same time provision is made for its expansion and contraction. In service the active material is gradually eroded from the surfaces. The bars, being embedded in the material, contact is maintained until the amount of active material is



so reduced as to no longer be sufficient to give the proper capacity. The separation of the faces of the plate into relatively small sections by the ribs and bars prevents the rapid removal of the active material by the "wash" of the electrolyte.

The separators used in these cells are of wood and similar to those used in the Chloride-Manchester batteries. A plain perforated hard rubber sheet is also placed against each face of the positive plates.

The standard brougham or hansom battery of the Exide type consists of forty-four cells of the T V-9 size, having four positive and five negative plates. The rubber far is the same as that used for the T V-7 Chloride-Manchester cell, and the batteries are assembled in trays of the same size, making the two types of battery interchangeable in the vehicle.

WATT HOURS INCREASED 50 PERCENT.

The weight of this battery complete with tray, etc., is 1,650 pounds, or 140 pounds less than that of the Chloride-Manchester type. The capacity is 156 ampere hours at the four hour rate of thirty-nine amperes. The average voltage during discharge is eighty-seven volts; the watt hour capacity, therefore, is 13,572 watt hours, an increase of 50 per cent over that of the Chloride-Manchester batteries and of 62.5 per cent per pound. Using the figures for average vehicle consumption already given, the mileage capacity will be under average conditions 42.7 miles.

In connection with the general subject of mileage capacity, it should be noted that the mere statement that a certain vehicle equipped with a certain battery has run a certain number of miles on a single charge is valueless unless accompanied by additional data concerning the relative weights of vehicle and battery, the load carried, the power consumption per mile, the speed, etc. Nor does the attainment of a high mileage capacity necessarily imply commercially successful operation. Increase in radius of action on a single charge may be obtained in three ways-by increasing the proportionate weight of the battery by decreasing the power consumption per unit of weight per mile, or by increasing the effective capacity perpound of battery. Ill considered steps in any of these directions may easily result in an increased maintenance cost which will far outweigh the advantages of increased mileage capacity. No reliance should be placed on any statements in which full details of the attendant conditions are not included.

HOW BATTERY EXPENSE IS FOUND

The battery policy of the New York Transportation Company necessarily depends very largely upon the question of cost of operation per vehicle mile. It has, therefore, been most gratifying to find, after a year of operation, that the Exide battery not only provides a sufficient mileage capacity for all classes of metropolitan service, but at the same time can be operated at a cost, including maintenance, but little in excess of that of the Chloride-Manchester, and within the limits of reasonable expense.

This conclusion is based upon the results obtained from seventy-five batteries of the forty-four T V-9 size, which have been in continuous service for about one year.

In calculating the battery expense per vehicle mile the cost is divided under two general heads, "Operation" and "Maintenance." The latter is subdivided into "Renewals," "Cleaning" and "Repairs."

In the cost of operation are included the expense for current and labor used in charging and handling the batteries, and also of the acid and labor used in regulating and replenishing the electrolyte.

All batteries are removed from the vehicles for charging. This is done both to facilitate inspection and to avoid the loss of time and other complications that would result from having the vehicle lie idle during the charging period. The batteries are handled entirely by machinery. Labor is thus reduced to a very low figure.

Current for charging purposes is taken direct from the high tension alternating mains of the New York Edison Company, at 6,600 volts, twenty-five cycles. This is transformed and converted to direct current at pressures from ninety-eight to 110 volts. The equipment of static transformers, rotary converters, etc., necessary to accomplish this are owned and operated by the Transportation Company. The capacity of this installation is 800 k.w.

OPERATION OF SWITCHBOARD.

Four sets of large, stationary storage battery cells are also included in the equipment, being used as booster and crusher batteries to secure a number of bus pressures from a single rotary converter.

Four bus pressures are provided at the charging switchboard, being ninety-eight, 102, 106 and 110 volts, respectively. The batteries are put in charge on the lowest and moved up as the current falls until the highest bus is reached. When the current taken on this bus falls to a value depending somewhat upon local conditions, but which averages ten amperes for Chloride-Manchester and seven amperes for Exide batteries, the charge is complete and they are cut out. The batteries, being kept in good condition, can stand fully charged for twenty-four hours without appreciable loss of charge, the loss in the course of a week being only about 10 per cent. By careful attention to this portion of the work and by keeping the batteries in an efficient condition a very fair degree of efficiency between the charging switchboard and the vehicle motors has been attained, the figure being about 50 per cent watt efficiency, which, considering the high rates of charge and discharge and the loss of efficiency by operation on partial discharges, as will be explained later, is very creditable.

The charging of all the batteries is controlled from a single central switchboard. Under the system adopted this portion of the work is so simplified that, even during the hours when the greatest number of batteries

are being charged; one boy is able to handle the entire board.

The specific gravity of the electrolyte of the Chloride-Manchester batteries is 1.250 when the cells are fully charged, and that of the Exide batteries is 1.300. The maintaining of the density of the solution at the proper point and the replacing with water distilled on the premises of the loss by evaporation is very important. This work is in the hands of specially trained men.

Maintenance includes, under the subhead of "Renewals," the cost of plates, separaters and incidental supplies used in maintaining the integrity of the equipment.

FACTORS IN COST OF RENEWALS.

The most accurate figures on the cost of renewals are based on the life of the plates. etc., in vehicle miles. This will, of course, depend greatly upon the conditions of service. The greater the mileage made on each charge, the longer will be the life, other things being equal. An Exide battery which had made 1.480 miles on forty charges, or an average of thirty-seven miles per charge, showed no more deterioration than one which had made but 1.040 miles on the same number of charges, or an average of only twenty-six miles per charge.

The average mileage per charge made by the Exide batteries in regular service is only twenty miles. The necessity of sending out every vehicle each morning with ample power to meet the extreme possible requirement of every customer makes it difficult to increase this average, although the cost of renewal would be decreased could it be done.

The operation of batteries on partial discharges also means a reduced efficiency, as mentioned above. The reason for this will become evident from a consideration of the following: Taking, for instance, an Exide battery having a capacity of 13,572 watt hours. It the watt efficiency on full discharges be taken as 75 per cent., the charge after a full discharge will amount to 18,096 watt hours, or an excess of 4,524 watt hours. If, however, only one-third of the capacity be taken out, or 4.524 watt hours, it will still be necessary in order to fully charge the battery to give an excess charge very nearly as great as in the former case, or, say, 4.200 watt bours, making a total of 8,724 watt hours, or an efficiency of only 52 per cent.

ADVANTAGES OF PRIVATE OWNERSHIP.

The private owner of an electric vehicle has, for these reasons, a decided advantage over a company renting them, as, knowing in advance the service required, he can operate his battery up to a much higher average mileage per charge, increasing its life and efficiency.

The seventy-five Exide batteries placed in service by the New York Transportation Company nearly a year ago, had made, up to February 1, 1902, an average of 3,742 miles each. Seven of them had made over 4,500 each, the maximum being 4,958 miles. Thirteen of these seventy-five batteries had been

rethred from service up to February 1. Two of these were withdrawn from service because of their having been involved in accidents in which a number of the plates were damaged beyond repair. The others have been withdrawn from time to time, not because they were unfit for further service, but to provide plates for necessary renewals and replacements in the remaining batteries. The idea has been to treat these seventy-five sets as a unit, gradually weeding out the plates which, through accident or use, fall below the rated capacity, and in this way to secure figures on the average life of the plates.

A very rigorous standard has been adopted in determining the end of the life. No battery is allowed to remain in service after it falls below its rated capacity, as given above. This is made possible by reason of

stated that the capacity during the life is even more constant than that of the Exide elements. The initial capacity is about 8 per cent in excess of the rated capacity, rises very slowly to a maximum of 15 per cent to 17 per cent in excess, and after falling gradually to the rated capacity, remains constant at that point for a long time.

The introduction of wood separators has greatly improved the performance of these batteries by preventing "weak" or "dead" cells due to partial short circuits, as explained, and the present average capacity of all the sets of this type now in use is about 6 to 8 per cent above the rating.

Under "renewals" come also the separators. The life of these has already been mentioned, and this expense is small.

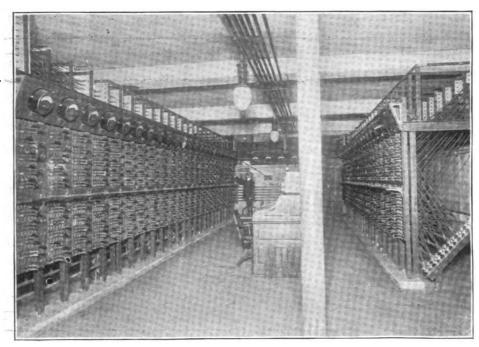
Cleaning, the next item in the cost of

off and placed in the clean jars. Fresh acid is then put in, the straps reburned and the battery is again ready for service.

The third principal cost of maintenance is that of repairs. While the mechanical battery handling equipment is admirably adapted to its work occasional mishaps are unavoidable, and a portion of the repairs are of damage resulting from such accidents.

The bulk of the repairs at present is of broken connecting straps. Many of the older batteries were equipped with straps which experience has shown are too weak. These are rapidly being replaced by heavier ones, and this source of trouble will soon be largely removed.

Jar breakages average one per 1,000 miles, most of this occurring in the battery room. As the majority can be repaired, this does



BATTERY CHARGING SWITCHBOARD.

a most valuable characteristic of cells of the Exide type, i. e., the maintenance of a very constant capacity during most of the life of the plates. In other words, the capacity upon which the above figures are based is not the maximum reached by the cells in the course of their life, nor the average capacity during that life, but is the minimum capacity. The initial capacity is about 6 per cent above this capacity, or four and one-fourth hours at thirty-nine amperes. This increases during the first twenty to twenty-five discharges to a maximum of 25 per cent above the rated capacity, or five hours at thirty-nine amperes. From this point it gradually falls until the rated capacity is reached. The end of the life is then at hand, the fall in capacity from this time on being very rapid.

explained above. These considerations reduce the apparent difference in cost of operation, and the greater mileage capacity of the Exide makes it, for some classes of service, far preferable.

While on the subject of the life of the Chloride-Manchester batteries, it may be

maintenance, is made necessary by the gradual accumulation of sediment in the bottom of the jars. The plates rest on ribs which are two inches high. The active material is thrown down more rapidly from the Exide than from the Manchester plates. Cells of the former type require cleaning after each 1,500 to 1,800 miles, and of the latter after each 2,400 to 2,800 miles. With the corrugated perforated hard rubber separators Chloride batteries had to be cleaned after only 600 to 1,200 miles, due to the sediment lodging between the plates instead of falling to the bottom.

If cleaning be delayed after the sediment accumulates in sufficient quantity to touch the bottom edges of the plates deterioration is very rapid. A watch is therefore kept on the mileage, and examination made from time to time and the cells cleaned out promptly when it becomes necessary.

The work of cleaning is systematized, and is not a serious matter. A set of clean jars in a tray is provided, the connecting straps are cut and the elements lifted out, rinsed

not constitute a large item of expense.

Expenses of all kinds are kept down by requiring and maintaining a high standard of condition of the batteries. The regular routine includes frequent examination for all of the troubles which may develop, and these are at once corrected when found.

Thanks to the careful design of the elements, there is absolute freedom from many of the ills to which a storage battery is popularly supposed to be by nature heir.

Neither the Exide nor Manchester plates, as operated by the New York Transportation Co., buckle or grow even under severe ill treatment, and they are sufficiently stiff and strong to withstand without injury the handling incidental to cleaning, repairing and reconstructing.

Storage batteries do not demand the attention of skilled mechanics, but they do need reasonably Intelligent care, and the cost of maintaining them will be a minimum if this be given regularly, and a maximum if given spasmodically. The New York Transportation Co. has not found it necessary to pro-

vide a large force of skilled workmen to operate and maintain its batteries, a relatively small number of careful men, of ordinary ability, working under competent supervision, being able to handle all of the work.

The practical result of the system of caring for batteries is shown by an examination of what is known as the "daily trouble report." This comprises a carefully kept record of every trouble necessitating the repair of vehicles in the streets or their being towed to the station through inability to run on their own power. The vehicles and batteries participating in these failures are carefully inspected, and the results of the inspections incorporated in this report.

NEW STATION REDUCES EXHAUSTION.

During the months of operation prior to and just following removal to the new station, and when, as stated, the batteries were, through stress of circumstances, improperly cared for, the cases of power exhaustion averaged from five to seven per 1,000 vehicle miles. In the new station, with the better care made possible by increased facilities, the number of cases of power exhaustion has been reduced to an average during the last nine months of operation of only 1.31 per 1,000 vehicle miles. These figures include power exhaustion from all causes, and the great majority are due to improperly oiled bearings, defective motors, snow or mud covered streets, carelessness on the part of drivers in wasting power, attempts to make abnormally long runs, etc. These figures are being improved upon, but already the showing speaks well for the batteries and for the system of charging and caring for them.

The good results secured are also undoubtedly due in a great measure to the improvements made in the vehicles and to the efficient administration which prevails in the department responsible for their condition. The power consumption has been reduced to the figures given by the change from pneumatic to solid tires, changes in the bearings and a careful treatment of many other details, of which it is not possible within the limits of this article to speak at length. The storage battery is the least variable of the many factors involved in electric vehicle

CONSERVATIVE FIGURES ON RATING.

Rating the cells on this basis results in great satisfaction to the user, as the average capacity during the whole life is upward of 12 per cent in excess of the rating. The average maximum capacity has been given as 25 per cent higher than the rated capacity, or five hours at thirty-nine amperes. This is a conservative figure, many batteries rising as high as five and one-quarter to five and one-half hours at that rate, and few failing to go as high as five hours.

The high capacity attained by these batteries has made possible continuous runs on a single charge far in excess of the 42.2 miles given as the mileage capacity under average conditions. The New York Transportation Co. appreciates that an abnormal performance under special conditions has little

practical value, and no special effort has been made to establish a record. Runs of over sixty miles have, however, been made on several occasions, both in regular operation and under test conditions

AVERAGE ESTIMATES OF LIFE.

The average capacity, as ascertained by recent test discharges, of the seven batteries which had made, up to February 1, over 4,500 miles, is four and one-quarter hours at 39 amperes. All of these batteries are still in operation, and doing as good work as at the beginning of their life. The average capacity of all the other batteries still in service (sixty-two out of the original seventyfive) was, on February 1, about four and one-half hours at thirty-nine amperes. conservative estimate of the average life which will be obtained would seem, therefore, to be not less than 4,500 miles. This refers only to the positive plates. The negative plates in all of these batteries show much less deterioration than do the positives, many being apparently as good as when first placed in service. There is no doubt that a majority of them will be able to outlast a second set of positives.

SCRAP PLATES HAVE GOOD VALUE.

Assuming that only one-half will have a life double that of a set of positives (and this estimate is a safe one), the total life of one-half will then be 4,500 miles, and of the other half 9,000 miles, or an average life for all plates of 6,750 miles. If, then, the life of the positives be 4,500 miles, the average life of all plates will be 5,625 miles. At the end of this life the plates are still worth from \$30 to \$40 as scrap lead.

These figures have been most carefully checked, and are believed to under, rather than over, state the life of elements of this

The life of the Chloride-Manchester elements is much greater than that of those of the Exide type, and has not been so accurately determined. As operated by the New York Transportation Co., these batteries suffer, in common with the Exide batteries, in being necessarily operated on a mileage per charge much below their capacity, the average being only ten miles. As an average of but one charge a day is given, the yearly mileage of these batteries is in the neighborhood of 3,600 miles. The oldest batteries of the T V-7 Chloride-Manchester size now in use have been in service only two years, and show but little deterioration except where there have been adverse conditions.

Prior to the introduction of the wood separator, and during the months just previous to the removal of the company to its present station at Forty-ninth street and Eighth avenue, operation was conducted under great difficulties. The old station, located at 1,684 Broadway, had been outgrown, the business having assumed such proportions that the equipment and floor space were no longer adequate. During this time the batteries did not receive the attention necessary to satisfactory results, and for a time deterioration was rapid.

WHY SAME DATA IS MISSING.

Another reason why better data as to the life of batteries of the Chloride-Manchester type is not available is the fact that the earlier years were to a great extent years of experiment. The vehicles used during 1897, 1898 and 1899 were equipped with various sizes of battery, and it was not until 1900 that an equipment was secured using a uniform size in all vehicles of the brougham and hansom types. Many of the older ve-

hicles were sold, and others were reconstructed to adapt them to use the new size of battery. The older batteries, therefore, became obsolete before the end of their life had been reached. The company still has in its possession many of these old sets, and they are gradually being made use of by reconstruction and adaptation to the present equipment.

BATTERIES ON STREET CARS.

Another use which is being made of these obsolete batteries is in connection with the express cars operated by the Metropolitan Express Co., one of the sub-companies owned by the transportation company. These cars are at present equipped with both ploughs and overhead trolley poles, adapting them for operation on either the underground or overhead systems at will. To still further increase the scope of operation, a number are to be equipped with storage battery auxiliaries, making it possible to run them on the tracks of the various horse car lines as well. Cars thus equipped with batteries formerly used on the vehicles have been successfully experimented with, and the work of preparing a number for this service is now under way.

But while data regarding the Chloride-Manchester type of accuracy equal to that of the Exide type is not at hand, much is known about the life of individual batteries, and fair conclusions may be drawn from an examination of the older of those batteries now in service, which have already made from 5,000 to 8,000 miles.

A calculation based on all available information gives as the life of Manchester positive plates 12,000 miles, and as that of the Chloride negatives 20,000 miles, or an average for both of 16,000 miles, or 140 per cent more than that of the Exide plates. would appear to constitute a very material difference in the cost of operation of the two types, and, taken alone, it would do so. Butand this point is too frequently overlookedthere are other factors in the total operating The labor in handling and charging, for instance, will be, per vehicle mile, twice as great in the case of the Chloride-Manchester battery, averaging ten miles per charge as for the Exide running twenty miles per charge, the labor to charge each being approximately the same. The Exide operated twenty miles per charge is also somewhat more efficient than the Chloride-Manchester running ten miles per charge, as operation, yet it is by the thoughtless the one most frequently blamed in the event of

BUSINESS ONLY LIMITED BY CAPACITY.

The business of the New York Transportation Co. has increased greatly within the year, and is limited only by the capacity of equipment. Disregarding pleasure vehicles, suitable only for summer use, over 90 per cent of the vehicles owned are in constant operation, less than 10 per cent being the proportion out of commission from day to day for repairs of all kinds. To sum up this presentation of the situation, the New York Transportation Co. is demonstrating in its daily business that the electric automobile has been developed to the point where, in reliability, radius of action and operating costs, it meets all the requirements necessary to commercial success, and that the development of a storage battery especially adapted to work under the rigorous conditions imposed has contributed greatly to this result.

So far from being an insuperable obstacle to the success of electrically propelled vehicles, the battery is to-day better adapted to its work than some other portions of the equipment, and, in point of maintenance cost, a smaller factor in the total expense of operation than are, for instance, the rubber tires on the vehicle it runs.

DIRECT CONNECTED

How One Designer has Combined the Inlet Valve With a Pulverizing Mixer.

A combination of the pulverizing type of carburetter and the mixing valve is a construction that more than one motor vehicle designer has had in mind as a possible refinement. An Englishman, A. Gower by name, has designed a carburetter of this kind, the details of which are shown in the accompanying illustration. The device consists of a casing within which the inlet valve moves and seats at the lower end. Just above the inlet valve a series of perforated diaphragms are arranged and adapted to act as bafflers or atomizers. At the upper end of the valve stem a small needle valve is inserted so as to slide axially therein, it being kept in an outward position by a small spiral spring, its range of movement being controlled by a small pin inserted through the needle valve and a slot in the stem of the inlet valve upon the uppermost diaphragm. The inlet valve is kept closed by a spiral spring outside the valve stem, on its appermost diaphragm.

Just above the needle valve is a valve seat formed at the end of the pipe connection to the gasolene tank. This seating is made adjustable to and from the needle valve, so that by the action of the spring the needle valve may be timed to open more or less later than the inlet valve, in order to regulate the character of the explosive mixture.

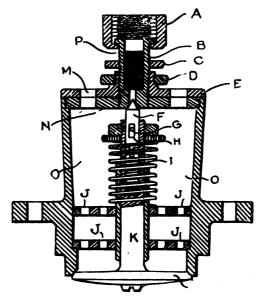
At the upper part of the casing a perforated cap is fitted, and above this cap a rotating plate is provided, also perforated, the perforations being arranged to coincide with each other in one position, and to be eclipsed by the intervening metal in the other position. The object of this arrangement is to regulate the amount of air drawn in at each stroke, and the suction for any given amount also affects the amount of liquid or gaseous fuel drawn in by such suction, a matter quite apart from the adjustment of the needle valve. A dust cap is fitted over the perforated cap so as to prevent dust being drawn into the engine.

The gasolene inlet passage just about the seating of the needle valve is packed with filtering material, such as wire gauze, to prevent any solid matter getting down to block the needle valve. The bafflers, or atomizers, are made in such a manner that when the suction takes place the explosive mixture is given a twist in its passage, and the liquid is broken up into such a fine spray against the atomizers that it becomes a capor, and therefore a perfect mixture—the carburetter, being combined with the inlet valve, is kept warm by the engine, this preventing any possibility of freezing in cold weather.

The device is undoubtedly ingenious and compact, and if the claims made for it are

fully borne out in practice, it should meet with large use.

The key to the diagram shown is as follows: A, union; B, adjustable seating; C, D, lock nuts; E, air adjusting disk; F, needle valve; G, pin through needle valve; H, slot trough valve stem; I, spring to keep needle



valve against seating; J, atomizers or baffle plates; K, valve stem; L, valve; P, filtering gauze.

Hele-Shaw on Roller Bearings.

In a paper read at a recent meeting of the Automobile Club of Great Britain, the subject being "Roller Bearings," Professor Hele-Shaw pointed out that whether they considered the question of starting from rest, or of easy running when in actual motion or of uniformity of action, the roller bearing presented great advantages for motor cars.

Seven great difficulties, however, presented themselves, he said, these being as follows: (1) The concentration of load at a point; (2) the expense and difficulties of obtaining rollers truly circular and cylindrical; (3) the rubbing of the surfaces of the rollers themselves; (4) the difficulty of adjustment; (5) twisting or the want of parallelism of the rollers relatively to each other when slightly worn; (6) the difficulty of providing for end action or side pressures; (7) hammer blow and shocks with motor cars when wearing has occurred.

After dealing with some of the bearings now on the market, reference was made to an ingenious device, in which the cage for roller bearings is made from an alloy having a melting point at a temperature less than that which would destroy the hardness or temper of the rollers contained therein, which in this case takes the form of balls. Professor Hele-Shaw elaborated a mode of adjustment by the adoption of cones, instead of cylindrical rollers, and concluded by a suggestion that a committee of the club should be formed to hold a series of experiments on types of roller bearings for motor cars.

BILL NOT YET SIGNED

Massachusetts' Governor has so far Withheld his Signature—The Obvious Feature.

There is a very good prospect that Massachusetts automobilists will not be harassed by the automobile measure which passed the Legislature last week. Governor Crane has so far withheld his signature from it, and, from all appearances, has no intention of allowing it to find a place on the statute books.

The bill makes the maximum speed eight to fifteen miles in the towns and country, respectively, and this is not seriously objected to. The obnoxious feature of the bill, however, is contained in the second section of the bill, which is as follows:

Sec. 2. When a motor vehicle approaches any vehicle drawn by a horse, if the horse or horses drawing such vehicle appear frightened, the person in control of such motor vehicle shall reduce its speed, and if the horse or horses continue to appear frightened shall bring the motor vehicle to a stop and keep it stationary until the danger has been avoided.

To this section there is a widespread and deep seated opposition. Motor vehicle users are using every effort to prevent its becoming a law. A hearing was accorded a delegation last week by Governor Crane. The latter asked whether the automobilists could not submit a form of bill which would accomplish the general purpose of the legislation and at the same time be satisfactory to them. An effort, it is understood, will be made to carry out this suggestion.

Must be Made in Germany.

In offering money prizes of considerable value for alcohol motors, the German Government is aiming to kill two birds with one stone. It deems it wise to foster the alcohol industry, and it has a real need for improved military vehicles for transportation purposes.

The offer was made public last week in the "Reichsanzeiger," and consists of first, second and third prizes, of 10,000 marks, 5,000 marks and 2,500 marks, respectively, for the best alcohol motors for military uses. These motors must be made in Germany. They are to weigh less than eight tons and must be capable of drawing sixteeen tons on good roads. The motor by itself must be able to cross meadows, ploughed lands and water eighteeen inches deep. The tires may be twenty inches wide. According to the terms of the offer these machines must be ready to be tested in February, 1903.

If a suitable track can be obtained, C. R. Klosterman will undertake the management of a series of automobile race meets at Philadelphia this season, beginning in May. The mile track at Point Breeze is almost the only one available, and it is not known whether it can be secured, as it is to be sold at auction this month.

JUST FOR LACK OF MONEY

How a Member of the Staff Missed an Opportunity to get Into the Business.

Of the making of automobiles there is no end, hence of the methods of selling them there must also be an unending attempt at securing some new way to impress upon the possible purchaser the advisability of his choosing this vehicle over that or the other. Some of these attempts to develop new selling methods have succeeded only in bringing back to life tricks of the trade, such as probably Noah used when he sold the ark to the second hand dealers at the foot of Mount Aarat. Others of the innovations are so radically new that they defeat the very object for which they were ingeniously invented, and so frighten purchasers away rather than attract them, as the innovators had expected they would do.

Among one of the most amusing examples of this new school of manufacturing whose efforts are first devoted to the producing of an unsalable article, and then to the attempted disposal of it, the following is an excellent sample.

In a New York Sunday paper appeared this advertisement:

"AUTOMOBILES!—Amazing Opportunity.
—Manufactory closing business will sell balance of the most successful Carriages on the market at 10 per cent of their cost, including special tools, patterns, drawings and full authority to continue manufacturing; no such opportunity ever before offered in this profitable and rapid growing industry; but small amount of money required to continue the business."

Then followed an address where the man who wanted to buy "the most successful carriages on the market at 10 per cent of their cost" could supply his wants. Believing that at the price set forth "the most successful carriage on the market" must be very much of a bargain, an investigation was begun, and from "W. M. Reynolds, manager, Inter— Motor Carriage Co.," the following proposition was received:

"The Inter— Motor Carriage Company, incorporated under the laws of the State of New Jersey, have been in existence for the last three years, during which time they have manufactured some of the most successful carriages on the market.

"They now propose going out of business, and I have secured an option on the balance of their stock of carriages, nine of which are substantially completed and sixteen all ready to assemble.

"There are no outstanding debts or liabilities against the company, but one of the officers of the company has advanced \$4,000, with an agreement that this amount shall be returned to him out of the first proceeds received; on payment of this amount a clear transfer will be made of all the stock of carriages, special tools, patterns, drawings and

details, with full power to continue the business.

"To assemble these sixteen carriages—according to two experienced mechanics—will cost \$150 apiece. To a person advancing this \$4,000 and the amount to assemble the sixteen I will give one-half of the proceeds of the sale of the carriages, tools, stock. etc., they first deducting the \$4,000 and amount for assembling those unfinished.

"None of these carriages have ever been sold for less than \$1,200, and if they had been completed in time for last season, all could have been sold within two months at this price; but I now propose selling them at \$1,000 each, or possibly less, to insure turning them over quickly with the first spring sales, and at a figure they will sell for—even at auction—we should clear at least \$6,000 or \$7,000 above all outlay."

Unfortunately The Motor World man's visit was made on the day preceding payday, hence he had not all of the \$4,000 which was required to accept Mr. Reynolds's offer, so the deal was not consummated. But what do you think of the proposition?

To use Against the Boers.

Owing to the fact that South African roads bear a strong resemblance to those in this country, it is claimed there is a field in the former country for motor vehicles of American manufacture. A Captain Walker, of the British "Royal Engineers," has sent a communication to the Automobile Club of America, dated at Pretoria, South Africa, January 10, 1902. It asked the club's assistance in obtaining from American manufacturers specifications and prices of light automobiles. steam and gasolene motors and motor bicycles. Captain Walker intimated that his commander-in-chief would extend the use of motor vehicles in the present campaign against the Boers.

In a Solid Form,

Experiments are being conducted by an English concern with a view of determining whether it is possible to use petroleum products in a solid form in internal combustion motors. It is said that these tests, although they are not completed, have already demonstrated that in the solid form greater heat is generated than from the liquid, and when burned in a Bunsen burner a temperature of 5,000 degrees Fahrenheit was attained.

Here's News, Indeed.

"An idea of the inroads, present and prosspective, which the American automobile is making and will make in foreign territory may be had from the fact that during the present year an exhibition composed entirely of motor vehicles designed and built in the United States will be held in the Crystal Palace, London," states the "Scientific American."

Friends of the Marquis de Dion recently gave him a banquet in Paris in recognition of his valuable services in the interest of automobiling.

REMOVED THE OBJECTIONS

New Bill Before the Legislature has Automobilists Support.

No opposition to the automobile measure now before the Rhode Island Legislature developed at the hearing before the Judiciary ('ommittee of the House at Providence last week.

Prominent automobilists, among them President J. A. Chase. R. Lincoln Lippett and H. H. Rice, of the local club, appeared in support of the bill. The latter was drafted at the suggestion of the automobilists. The objections to it in its original form were based on the section in regard to permission for races, but this is fixed so that the matter is intrusted in the hands of the local authorities, who can do as they see fit.

The speed has also been restricted in the compact parts of the towns.

It is expected that the act with a few changes will be reported favorably by the committee the early part of this week, and will be passed by the Assembly before its adjournment.

Chicago Limils Speed, Too.

Chicago has a Board of Automobile Examiners, and in order to demonstrate its right to the name it recently took up that very popular subject, the limit of the speed of automobiles. It fixed twelve miles an hour in outlying neighborhoods and eight miles in the business districts as the speed at which automobiles may be run. The enforcement of the order will be left to the police, who will be required to see that this rate of speed is not exceeded in any case.

Talked About Automobiles.

Political matters are in a very tense condition just at present in this city. Consequently, when District Attorney Jerome called on Mayor Low last week, and was closeted with him for several hours, great curiosity was felt, and everybody wondered what was up. To inquiries addressed to him Mr. Jerome replied in a quizzical tone:

"Oh, I called on the Mayor in order to consult with him about automobiles. I asked him which kind he thought was the best—gasolene, steam or electric. We talked the matter over at some length."

The Mayor was probably able to help his colleague out, as in the campaign last fall he nearly always made use of an automobile as a means of transport during his speech making tour.

Air and Water Pumps.

THE UNION STEAM PUMP CO., BATTLE CREEK. MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.





An English dealer says he has \$40,000 worth of second hand automobiles in stock.

. It is reported that the Chicago Automobile Club contemplates holding an endurance run.

The Jersey City Automobile Club looks forward to a more active season than it had last year.

The Union Motor Truck Co., No. 106 Tasker street, Philadelphia, manufacture gasolene delivery wagons.

On May 1 the Chicago branch of the Electric Vehicle Co. will be removed to No. 1,421 Michigan avenue.

The Century Motor Vehicle Co., Syracuse, N. Y., are experimenting with a kerosene burner for their steam vehicle.

The Banker Bros. Co., of Pittsburg and Philadelphia, have opened a New York branch at No. 256 West 80th street.

Negotiations are under way looking to the establishment of an automobile 'bus line between Windsor Locks and Warehouse Point, Conn

The Long Island Automobile Club has in view a new clubhouse, the ground floor of which will be used for housing motor vehicles.

M. Emile Mors is quoted as saying that last year his firm turned out 350 vehicles and that the number would be doubled in 1902.

Among the places which the Chicago Automobile Club have in view for a clubhouse is the old panorama building on Wabash avenue.

The Electric Storage Battery Co., Philadelphia, have gotten out a second edition of their price list "X," covering the Exide Accumulator.

The first of the nine Winton touring cars ordered by members of the Rhode Island Automobile Club is expected to reach Providence this week.

It is estimated that there are two hundred automobiles in Hartford, Conn., and that the number will be almost doubled before the close of the season.

"A smart looking machine," is the way the Autocar speaks of the new gasolene vehicle of the International Motor Car Co., which it illustrates and describes. At least one pattern of the 'buses now being used on London streets is fitted with a sand box, designed to facilitate starting on slippery or steep roads.

An automobile 'bus service is shortly to be inaugurated between Houston, Tex., and Harrisburg. A large wagonette has already been purchased for the purpose.

Baltimore automobilists have won a great victory in having Druid Hill Park opened to them. The bill legalizing their passage went through the Maryland Legislature last week.

The Automobile Club of Austria has a new president, Count Frederick Charles Schoenborn-Buchheim. He succeeds Count Poetting, who has served since the club was organized.

Eight miles an hour is the legal speed limit in Buffalo, N. Y., and it is asserted that it is frequently exceeded by automobilists. The police are about to start a campaign against the habit.

The Westchester Automobile Co. have opened a new station at No. 523 Fifth avenue, this city. The place is always open, a feature that will be appreciated by belated automobilists.

The Knox Automobile Co., Springfield, Mass., have their Western representative, H. M. Davis, located at No. 366 Wabash avenue, Chicago, to look after their Western and Chicago business.

Automobilists in Cape Town, South Africa, are agitated over a proposition of the town authorities to limit speed to six miles an hour in the city and suburbs and to eight miles on country roads.

The automobile section of the New York Athletic Club now numbers ninety members, and it is expected that before the season is over it will reach 200. A run to Travers Island has been arranged for Sunday.

G. H. Atkins, formerly manager of the Chicago branch of the Electric Vehicle Co., has been appointed Western manager for the Electric Storage Battery Co., of Philadelphia, with headquarters at Chicago.

During the month of February automobiles and parts to the value of \$34,500 were exported from this country. For the eight months of the fiscal year ending February 28 the value of these exports were \$429,182.

The opening run of the Automobile Club of America to Ardsley, which was post-poned from Saturday last on account of the rain, will take place on Saturday of this week. The start will be made at 10 o'clock sharp.

May 15 to 26 are the dates set for an automobile show to be held at Berlin. It will be given under the joint auspices of the German Automobile Club, the Mid-European Mo-

tor Car Union and the German Motor Car Builders' Association.

According to the London Graphic, the London season of 1902 will go down into history as the "autocar season." It is expected, it adds, that for every motor vehicle that ran through Piccadilly a year ago there will be ten two months hence.

A persistent effort is being made to connect A. L. Riker with a new automobile enterprise. The latest rumor links his name with that of the Overman Automobile Co., which concern is said to be building him a high powered gasolene vehicle.

The work of signboarding the course of the Long Island Automobile Club's 100 mile run, to be held on April 26, was begun this week. Messrs. Fullerton and Pardington have charge of this matter, and have already put up a number of signs.

An echo of the incorporation of the Wright Taper Roller Bearing Co., which occurred a few weeks ago, came last week, when two acres of land at Main street and the Erie Railroad Crossing were purchased by the concern. A large factory will be erected there.

Apropos of the appearance in London of a number of American 'buses, the English papers are beginning to ask if the field is to be turned over to them. "Have not our British manufacturers anything to say in the matter of the big motor future of the cities' streets? They must look alive, or we shall soon hear of another big American deal à la Yerkes."

The Riley Engine Co., Paterson, N. J., will equip a shop at No. 125 Montgomery street, that city, and engage in the manufacture of the engines, of automobile trucks and pleasure carriages equipped with the Riley device. In consequence of the simplicity of the engine, and the few parts that enter into its construction, it can be manufactured very cheaply.

Houston, Tex., now has an automobile club. Its formation is largely due to a woman, Mrs. L. M. Adams, who was elected treasurer. The other officers are: J. R. Myers, president; D. E. Sturgis, secretary. A year ago there was not an automobilist in Houston, whereas there are now a dozen, nearly all of whom have joined the club. The latter will begin a fight for road improvement, and, in addition, runs and tours will be arranged.

An effort is being made to organize a company for the purpose of operating the automobile stage line in the Santa Clara (Cal.) Valley. Nine steam vehicles, with a capacity of twelve persons each, are standing idle owing to the dissolution of the concern originally formed to operate them. They will be placed at the disposal of the new one, if the efforts to organize it are successful. Already four-fifths of the \$16,000 necessary to purchase the vehicles has been subscribed.

Production now Engrosses Them.

An effort is being made to have it appear that the Winton Motor Carriage Co. is unable to make deliveries booked now for its new touring car until late in the summer. The extraordinary favor with which this vehicle met immediately upon its introduction is well known, and is generally assigned as the reason for the inability to deliver promptly.

Touching on this point, the Winton company write that while it is true that a large number of orders for the touring car were upon their books before they began to make regular deliveries, now the facilities of their entire plant are concentrated upon the production of these cars, and they are coming through the factory so smoothly and in such gratifying quantities that a large hole has already been made in the order list. In a short time they will be abreast of orders, and in the case of orders booked at this time they are able to assure satisfactory delivery dates.

"Our time and energies are given to production," they add. "The experimenting was finished last year."

Remington Branches out.

It is expected that in a week or two the Remington Automobile Co., of Utica, N. Y.. will be located in its new plant. The present quarters have been quite outgrown, and at a recent meeting of the Board of Directors it was decided to purchase the property and factory buildings in the east end of the city, bounded by Niagara, Broad and Ontario streets, together with vacant property on the north side of Broad street running through to the canal. The main factory is one story, being 80x200 feet, and there are numerous smaller buildings which, combined, will give the company a capacity of ten complete carriages a week, ten complete motors, and from three to five complete launches a week, with ample room for the building of additional factory buildings should occasion reauire.

Will Make Automobiles.

J. B. Eccleston, manager of the Wm. Hengerer Co., Buffalo, N. Y., has resigned his position with that company to embark in the manutacture of automobiles. With him will be associated H. C. Wilcox, of the American Wood Rim Co.; Fisher Atherton, formerly of the Buffalo Cycle Mfg. Co., and others.

The shop of the Metal Goods Mfg. Co. will be used, it is said, and both electric and gasolene motors will be manufactured.

Praise From Sir Hubert.

Under the caption of "A New American Car" the Motor Car Journal describes and illustrates the Oldsmobile. It winds up by saying that "the most striking point about the vehicle is the almost absolute silence of its running, which seems hardly sufficiently accounted for by the large, but not obtrusive, silencer, which is furnished with asbestos lagging; and, while unable to reconcile our-

selves to much that is characteristic of American design, we must admit that the vehicle seems a successful effort after simplicity and "foolproof" construction.

Back-Firing Problems.

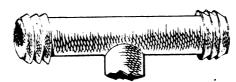
Edltor Motor World:

I shall esteem it a favor if you will give me the benefit of your valuable opinion respecting the disadvantages of "back firing" in steam automobiles, and whether any effective remedy has been devised to remedy this defect. I notice in the English press that an expedient has been illustrated, but have not been able to ascertain whether it has proved a success. The expedient I refer to was that of using tale flaps at the outer ends of the smokestack.

BAINBRIDGE WILSON.

Philadelphia.

[The entire proposition can be best understood if a common kitchen range is carried in mind. In this household utensil it is nec-



essary to have a draught through the fire box and up the chimney, and when a down draught occurs from wind direction it very naturally blows the fire into the room. To overcome this the revolving chimney top cowl was devised on the weather vane principle to deflect the wind over the top of the cowl and in an upward direction. The objection to this is its tendency to force the draught. To overcome this forced draught. as well as to prevent down draught, many other devices have been made, including the hinged flap mentioned. The objection to the latter has been that it had a tendency to "hang" at times and cut off the natural draught.

Probably the most successful scheme is that used in the terra cotta chimney top, in which the upper end is made up of a series of rings having upwardly sloping edges. The point in this is that as the air strikes these rings it is deflected to the exit end of the chimney top. The same idea can be worked out in the flue ends on steam vehicles as per the suggestion in the accompanying illustration.—Editor.]

Recent Incorporations.

Trenton, N. J.—Mississippl Valley Automobile Co., with \$10,000 capital. Incorporators, S. H. Turner, jr., E. H. Bendest and Samuel S. Primm.

Kittery, Me.—Horack Carriage Improvement Co., with \$500,000 capital, to make and sell vehicles of all kinds. The officers are: E. L. Chaney, president; I. S. Woodruff, treasurer.

Saginaw, Mich.-Moffett Vehicle Bearing Co., with \$500,000 capital.

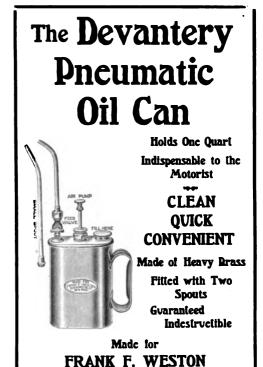
Hartford, Conn.—Spencer Auto Velicle Co., with \$200,000 capital, to deal in automobiles and other carriages. The officers are:

President, S. L. Larrabee, Portland, Me.; treasurer, W. F. Rogers, New York C'ty.

Waltham, Mass.—Waltham Auto Car Co., with \$150,000 capital, to make and deal in automobiles and other carriages. The officers are: President, S. L. Larrabes, Portland; treasurer, M. B. King, Waltham, Mass.

Worcester, Mass.—The Worcester Automobile Co., with \$1,000 capital, to lease and rent automobiles. The officers are: John A. Dean, president; George I. Rockwood, treasurer; C. J. Nowrie, secretary.

Camden, N. J.—American Motocar and Machine Co., with \$500,000 capital to manufacture motors. Incorporators, Frank G. Walter, John A. MacPeak, F. R. Hansell.



REASON AUTOMATIC AIR PUMP FOR STEAM VEHICLES.

81 Chambers Street,

NEW YORK

W. M. REASON, Pres. Orange, Mass., Feb. 5, 1962.
Reason Automatic Air Pump Co., Pontiac, Mich.
DBAR SIR:—Your air pump works well. We consider it the best we have seen. Yours respectfully,
GROUT BROS., By C. B. Grout.

This company builds two styles of pumps, one purely automatic, and one controlled from the seat of the carriage.

PRICE:

Automatic, \$25, complete.

Pump controlled from seat, \$18, complete.

For cuts, circulars, etc., address

REASON AUTOMATIC AIR PUMP COMPANY,



EPOCH-MARKING

Is This new German Daimler if Claims Made for it are Borne out.

The mystery that has been maintained regarding the new vehicles of the famous European manufacturers is still difficult to penetrate. With the opening of the riding season, however, it is inevitable that the secrets so well kept should be laid bare sooner or later

A very brief and imperfect description of the new 40 horsepower Mercedes just turned out at the Daimler Cannstadt works is now available, but it only whets the appetite for additional information. Reduction in weight and a great simplification of the various parts have been effected, as will be seen by the following:

It only resembles the 1901 Mercedes in

cial form of clutch is used between the motor and the change gear box. The clutch is so arranged that when disengaged the speed of the motor is automatically reduced. The frame is mounted on equal sized wheels, the weight of the complete 40 horsepower chassis coming out at only 17 cwt., 1,904 pounds.

Entries Coming in.

The interest in the 100 mile endurance run of the Long Island Automobile Club is being well sustained. Nine bona fide entries have been received, as follows:

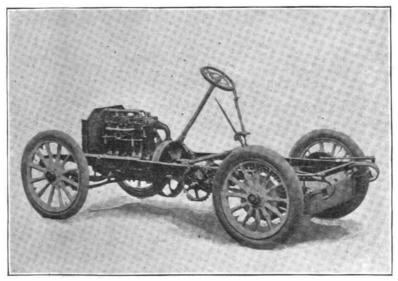
W. H. Wells, Passaic, N. J., four and a half horsepower, steam Prescott; H. M. Wells, Passaic, N. J., the same; C. J. Field, New York, a nine and sixteen horsepower gasolene Darrocq; International Motor Car Co., Toledo, Ohio, a seven and a half horsepower steam Toledo; A. G. Southworth, Brooklyn, the same; Harry S. Woodworth, Rochester, N. Y., a twenty-four horsepower gaso-

POPULAR BODY

British Association of Automobilists Democratic in Composition—Its Purposes.

The British "Motor League," which was formed about a year ago, now has more than two thousand members. The League is an offshoot of the Automobile Club of Great Britain, and is much more democratic than that rather exclusive body. This is clearly shown by the appended "Reasons for Formation," which are being sent out with a recruiting circular just gotten out:

"Since the formation of the Automobile Club of Great Britain and Ireland the necessity for a combination of automobilists for the protection of the individual and opposition to attempts to bring about unnecessary restrictive legislation has daily become more apparent. The work of the Automobile Club



FORTY HORSE-POWER MERCEDES.

outside appearance. The four cylinder motor has been denominated the "Mercedes Simplex," and the term is said to be justified by its appearance, no mechanism being visible except the four exhaust valve stems. Ignition is by a new style of alternating current apparatus, without springs, rods or contact breakers, and requiring no accumulators or coils; it is claimed to have the advantage of the magneto, and avoids the wearing parts of the latter.

The old governor has been discarded, and the motor is now controlled by a throttle valve on the induction pipe, by means of which the speed of the engine may be varied from 200 to 1,200 revolutions per minute. The water cooling apparatus remains as before, employing one and a half gallons of water only, but the draught inducing fan between the cooler and the motor has been dropped. Instead the engine flywheeel is made to serve as a fan, vanes being formed on it.

The speed gear bearings and practically all other bearings of the vehicle run on balls; these bearings are on the Maybach system, and have a friction coefficient of .012. A spe-

lene Panhard-Levassor; Percy P. Pierce, Buffalo, a three and a half horsepower Pierce motorette; George M. Brown, Hartford, Conn., a nine horsepower gasolene Haynes-Apperson, and H. B. Weaver, New York, a seven and a half horsepower steam Toledo.

The following manufacturers have notified the committee of their intention to enter one or more vehicles: Smith & Mabley, White Sewing Machine Co., Lane Motor Vehicle Co., Overman Automobile Co., Century Motor Vehicle Co., Foster Automobile Co., U. S. Long Distance Co., Regent Automobile and Machine Co., Automobile Company of America, Robinson Motor Vehicle Co., Waltham Manufacturing Co., Wheel Within Wheel Co. and the Passaic Metal Ware Co.

An automobile 'bus service may be established between North Milwaukee and Cedarburg, Wis. The stages will have a seating capacity of twelve, and from four to six trips per day will be made.

Two automobile 'buses have been purchased for use in the Southern Province of Ceylon in conveying passengers.

has to a large extent been in these directions, with the result that the attention which has necessarily been given to these important matters has probably, in some measure, impaired the social functions of the club

"In order to present an effective front to opposition, to foster the movement and to properly protect the individual, it is in the opinion of the committee indispensable that all automobilists, without reference to the question of social position (which of necessity has to be considered in elections to membership of the club) should be embodied under one banner.

"The committee has, therefore, decided to form the Motor Union for this purpose, and submit that, while it will in no way interfere with the prestige and influence of the A. C. G. B. I., it will have a valuable effect on the advance of automobilism in the United Kingdom."

It is reported that an order for fifty 'buses for use in England has been placed with the Chicago Motor Vehicle Co. The purchaser is a touring agency concern in London.



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The Week's Patents.

695,808. Driving Gear for Motor Vehicles. Alexander Govan, Bridgeton, Glasgow, Scotland. Filed Oct. 17, 1901. Serial No. 79,032. (No model.)

Claim.—1. In a driving gear, the combination with a motor shaft and a driven shaft in line therewith, of a spur wheel fast on the motor shaft, a clutch faced spur wheel fast on the driven shaft and adapted to slide into engagement with said spur wheel, a free spur wheel on the driven shaft, adapted to be engaged by the sliding spur wheel, a counter shaft, spur wheels fast thereon, meshing with the spur wheels on the motor and driven shafts, a sliding spur wheel on the counter shaft adapted to be thrown into and out of gear with the clutch faced spur wheel, and an intermediate or reversing spur wheel capable of being geared with the clutch faced spur wheel and with the sliding spur wheel on the counter shaft, substantially as set forth.

695,959. Motor Vehicle Running Gear. Philip K. Stern, New York, N. Y. Filed Mar. 21, 1901. Serial No. 52,133. (No model.)

Claim.—1. In a running gear for motor vehicles, a driver wheel or wheels adapted to carry the tractive weight of the vehicle and adapted to rotate the vehicle driving wheels by the traction due to the said weight, said driver wheels belong swung radially from the axle or cross bar upon which the steering wheels of the vehicle are mounted; substantially as described.

696,121. Motor Vehicle. Frederick A. Waldron, Stamford, Conn. Filed Mar. 8, 1901. Serial No. 50,361. (No model.)

Claim.—1. In a steam actuated vehicle the combination with a hollow, closed, air tight framework constituting the running gear of the vehicle, of means for creating a vacuum in said framework and means whereby the exhaust steam from the engine passes into said vacuum.

696,124. Mould for Curing Tires. Charles II. Wheeler and Franklin W. Kremer, Akron, Ohio; said Wheeler assignor to the India Rubber Company, Akron, Ohio, a corporation of Ohio. Filed July 30, 1901. Serial No. 70, 266. (No model.)

Claim.—1. A tire mould provided with a separable base portion in the form of an annulus

2. A tire mould provided with a separable base portion in the form of an annulus having its inner periphery tapered from the centre to the edge.

696,143. Motor Vehicle. Rudolph M. Hunter, Philadelphia, Penn., assignor to the Tractor Truck and General Power Co., a corporation of New Jersey. Filed Mar. 11, 1901. Serial No. 50,627. (No model.)

Claim.—1. In a motor vehicle a tractor truck consisting of driving and steering wheels and axles therefor, a long truck frame supported at a distance above the axles, spring supporting said truck frame upon all of the wheels and axles, and motive power devices for rotating the driving wheels carried by the tractor truck, in combination with a vehicle body portion supported at the rear on wheels, and a mechanical connection between the forward part of the vehicle body and spring supported truck frame consisting of a fifth wheel and a transversely jointed member hinged upon the fifth wheel.

C. Riotte and Eugene A. Riotte, New York, N. Y., assignors, by mesne assignments, to

U. S. Long Distance Automobile Company, Elizabeth, N. J., a corporation of New Jersey. Filed Nov. 29, 1899. Serial No. 738,674. (No model.)

Claim.—1. For sprayers and other devices, the combination with a tank having an inlet and an outlet, and a float in said tank, of a guide for a said float consisting of a tubular part fixed thereto and open at the bottom, and a guiding provision on said tank engaging and closing such tubular part, whereby the internal area of such tubular part affords sufficient capacity to prevent compression of its contents from materially interfering with relative movement between said float and tank

696,201. Sparking Igniter for Explosive Gas Engines. Frederick A. Seitz, Newark. N. J. Filed July 18, 1901. Berial No. 68,730. (No model.)

Claim.—1. A sparking igniter for explosive gas engine, consisting essentially of a bushing provided with a bore, an insulating ring in said bore, and a dividing wall of insulating material, forming a pair of chambers, and an electrical contact making and breaking rod in each chamber, substantially as and for the purposes set forth.

696,209. Envelop for Battery Electrodes. Elmer A. Sperry, Cleveland, Ohio, assignor to National Battery Company, Cleveland. Ohio, and Jersey City, N. J., a corporation of New-Jersey. Filed May 25, 1901. Serial No. 61.849. (No model.)

Claim.—1. The combination of a battery electrode and an envelop therefor consisting of threads or fibres of pyroxylin under tension wrapped around and around the electrode, substantially as and for the purpose set forth,

696,210. Automobile Driving Gear. Peter Steinhauer, St. Louis, Mo. Filed Jan. 13, 1902. Serial No. 89,574. (No model.)

Claim.—1. In an automobile driving gear, a front and rear axle, means for imparting rotation to the same, a coupling pole connecting the front and rear trucks, and extension members connecting the front axle with the coupling pole on either side of the latter, thereby permitting deflection of the axle and subsequent locking of the same in its deflected position, substantially as set forth.

696,231. Carburetting Device for Explosion Engines. Joseph Fillet, Neuilly-sur-Seine, France. Filed Jan. 12, 1901. Serial No. 42,975. (No model.)

Claim.—1. In a device for the purpose specified, the combination with an upright vaporizing coil, means for supplying a liquid hydrocarbon to the lower whirls only of said coil and maintaining the level of said liquid therein, an upright air conduit adjacent to said coil, and a mixing chamber into which the air and vapor are discharged, of means for heating the air conduit and vaporizer simultaneously with the hot exhaust gases from the engine, substantially as set forth.

696,298. Electric Igniter for Gas Engines. Vincent G. Apple, Dayton, Ohio, assignor to Dayton Electrical Manufacturing Company, a corporation of Ohio. Filed Aug. 31, 1901. Serial No. 74.020. (No model.)

Claim.—1. In an electric igniter, for gas engines, the combination with an engine cylinder of two electrodes, a means operated by the difference in pressure existing between the interior and exterior of said cylinder, adapted to control said electrodes, an electromagnet adapted to control said means, and a source of current for energizing said electromagnet, substantially as set forth.

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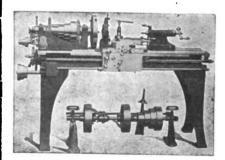
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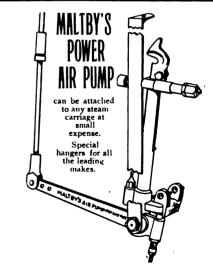
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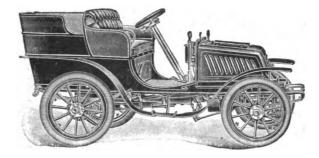
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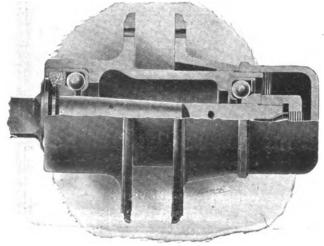
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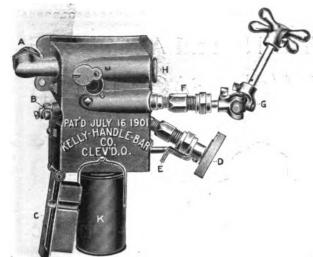
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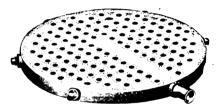
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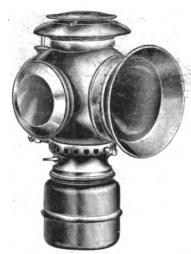
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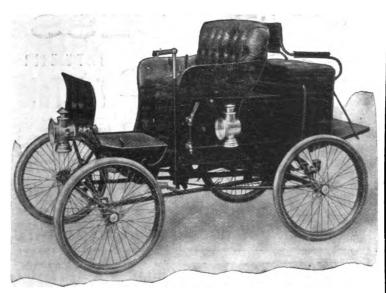


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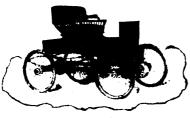
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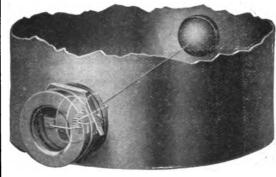
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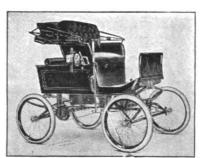
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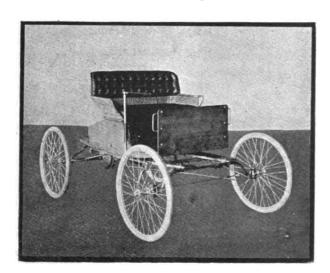
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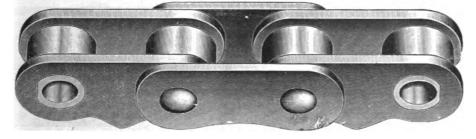
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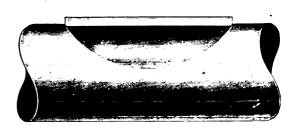
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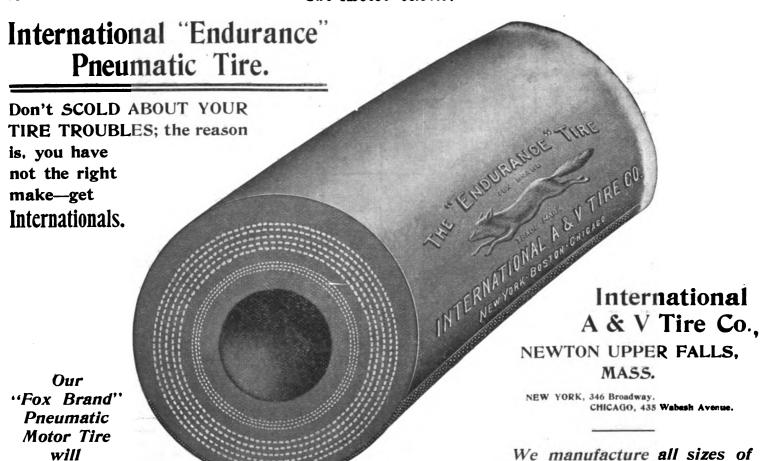
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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, April 10, 1902.

No. 2

GOVERNMENT GIVES REASONS

For Interdiction of Nice-Abbazia Race—Italian Authorities Feared Disturbances.

It is not easy at this distance to say whether or not the Italian Minister of the Interior has helped or hindered his case by making public his reason for interdicting the Nice-Abbazia race.

As reported by the cables this reason is as follows:

"The route marked out for the race passes through localities where fairs are just now being opened. It was feared accidents might occur which would disturb public order, regarding which during the present effervescence of public opinion no half measures can be considered.

"When permission to hold the race was given conditions, as far as regards public order, were quite different."

Beyond a by no means new unrest among the Italian lower classes, due mainly to the increasing difficulty of obtaining a living in that densely populated country, no particular "lack of public order" or "effervescence of public opinion" there has attracted attention elsewhere. So it is almost impossible to determine whether the minister gave a reason or merely an excuse.

However, there can be no doubt that the prohibition dealt the event its death blow. With the ban placed on racing on Italian soil there was left but an insignificant distance in Austria. This was very far from being worth travelling a good many hundreds of miles to traverse.

Indignation among the managers of the race, no less than among the participants and their friends, runs high. Much time and money had been expended in the preparations for the event, and without the slightest warning the action was taken that rendered it all useless. Mingled with the criticisms of the minister's course are blunt accusations of bad faith. The required permission had been granted, it was said, and then it was dithdrawn, suddenly and without adequate reason.

(Continued on page 52.)

Rules Ready; Permission Awarded.

All action relative to the one-mile trials of the Automobile Club of America is at a standstill awaiting the selection of a course and the obtaining of the requisite permission.

The rules governing the contest have been prepared and printed, and are in the hands of the race committee. Several courses have been examined, and at least one of them is entirely satisfactory. Application has been made for permission to hold the trials on May 31, and it is expected that within two or three days a favorable reply will be received. Then the matter will be made public, together with the rules.

The Motor World is in a position to state that no important changes have been made in these rules, and that the classes, etc., will be as announced in these columns several weeks ago.

Electric Entries Coming in.

Additions to the list of entries for the 100-mile endurance run of the Long Island Automobile Club, April 26, received during the week raise the number to nineteen. Of these one is an electric, a Waverley. Its makers, the International Motor Car Co., write the committee that they will probably enter three more electric vehicles.

Some disappointment was caused at the meeting of the club on Wednesday night by the non-appearance of George B. Adams, who was down for a talk on "Single Cylinder Horizontal Type Gasolene Machines." Messrs. Harry M. and W. H. Wells spoke entertainingly on steam vehicle construction in his place.

Will Run to Greenwich.

Greenwich, Conn., instead of Staten Island, will be the destination of the run of the Automobile Club of America set for Saturday of this week. The start will be made from the clubhouse, Fifty-eighth street and Fifth avenue, promptly at 10:00 a. m. The route will be via Jerome avenue and Pelham Parkway to New Rochelle, Mamaroneck, Rye, and Greenwich, returning via Portchester, White Plains, and Mt. Vernon, a total distance of about seventy-five miles.

NATIONAL RACING COMMITTEE

New Jersey man Gets the Plum—Other Committee Appointments are Coming.

In the work of making up the committees of the American Automobile Association a beginning has just been made. What is in some respects the most important one of all—the National Racing Committee—was taken up first, its chairmanship being tendered to William J. Stewart, of Newark, N. J.

Mr. Stewart is the secretary of the Automobile Club of New Jersey, and a director of the A. A. A. He represented his club at the meeting in Chicago when the association was formed, and took a prominent part in the debates which attended the process. His knowledge of the sport and trade—he is the leading spirit in the New Jersey Automobile Co.—is of such an intimate nature that his appointment cannot but inure to the benefit of the organization.

"Yes, the appointment has been tendered to Mr. Stewart," said Chairman Winthrop E. Scaritt to the Motor World representative, "but his acceptance has not yet been received. Several tenative offers of positions on other committees have also been made, but there is nothing to give out yet regarding them."

Merseles Goes to Toledo.

Theodore F. Merseles has been elected vice-president of the International Motor Car Co., and will go to Toledo, Ohio, next week to assume his new duties. He will take charge of the commercial end of the big company's business, thereby materially relieving General Manager A. E. Schaaf. The latter has been attending to both the business and the manufacturing departments, but upon the arrival of Vice-President Merseles he will relinquish the former, confining himself to the producing end of the business. Mr. Merseles was assistant to President R. L. Coleman of the American Cycle Mfg. Co., a confidential position of great responsibility.

The Motor World.

AUTOMOBILES ON RAILWAYS

Progress has Been Slow, but the Outlook is Encouraging—Differing Powers.

French Bureau Motor World,

2 Rue d'Abbeville.

Paris, March 28.-The railway companies were among the first to see the possibilities of the automobile as a factor in transport economy, and their engineers have given a particularly close study to this question, which is of much greater importance to them than is generally supposed. The economy of a railway system at present lies in averaging profits, that is to say, the lines which do a big and paying traffic have to compensate for others that are run at a loss. There are certain lines which are constructed and kept at work simply for the convenience of small districts, as well as of the State who pay subsidiet for the carrying of mails, and care nothing as to whether the company is making a profit, so long as it fulfills the terms of the contract. Under these circumstances the companies find it necessary to reduce expenses in every possible way, and as they must run a certain number of trains, there is very little hope of converting this loss into a profit unless they are able to use something more economical than their ordinary rolling stock. Several years ago the Northern Railway Company of France experimented with some Serpollet automobiles on one of the lines between Paris and the outlying suburbs. The traffic on this particular line was so small that the ordinary trains represented a big loss to the company, and as the mails had to be carried, they purchased a number of automobiles from the Serpollet Company, consisting of single vehicles with the Serpollet type of flash boiler and having a limited carrying capacity for passengers. The vehicles were in fact similar to the Serpollet tramcars, but designed specially for the new service. These automobiles, however, do not seem to have been altogether a success, as we have seen or heard nothing of them for some time past, and if they have not ceased running, it is certain that the Serpollet railway automobiles have not come into very extensive use. The same thing seems to have happened in Germany, where similar vehicles were experimented with on a local line in the neighborhood of Magdeburg. The only other application of steam automobiles to railways we know of is in Algeria, where Rowan cars are doing good service on a small line with heavy gradients.

As a general rule it may be taken for granted that steam automobiles are only successful from the point of view of economy under conditions where the traffic on short lines necessitates frequent running and stoppage at a large number of stations. These conditions, of course, exist on the tramways, and there are several lines in Paris with

services of steam cars on the Serpollet, Rowan and Purrey systems. There are many local railways where the conditions of traffic are practically the same as those existing on the tramways, and though the experience with steam vehicles has not yet induced the companies to employ them in the place of locomotives, it is probable that improvements in these vehicles will in time allow of their coming into much greater use.

One reason why the steam railway automobile has not been making more headway is the superior advantage of the electric vehicle. When a company finds that it possesses local lines which can only be properly served by a number of single cars running at short intervals, it does not hesitate to lay dows electrical plants. There is one line in Paris between the Esplanade des Invalides and Moulineaux which is served entirely by electric vehicles worked by means of a third rail, and the Orleans Railway Company also use electrical traction to their Paris terminus. This, however, as we have said, is merely a development of the tramway service, and there are only a few cases where electric automobiles with storage batteries have been experimented with for the occasional work of carrying mails and a small number of passengers.

Though progress has only been slow in the way of utilizing automobiles for railway purposes, it is certain that we shall see an extension of them in time. As a rule, the companies are very loth to carry out experiments, but they are willing to adopt anything which seems assured of success, and a case in point is seen in the experience of a newspaper proprietor in Bordeaux who, wanting to get his papers to Royan for distribution at an early hour in the morning and finding that they had to wait some hours at Saintes for the train, organized a service of automobiles to carry the newspapers from Saintes to Royan. The venture proved so successful that the railway company subsidized the newspaper proprietor to carry the mails at the same time.

Money King of Two Continents to Race.

Determined, apparently, not to be balked of his desire to engage in speed contests, W. K. Vanderbilt, jr., has according to cable dispatches, arranged a match race with Dr. Henri de Rothschild, of Paris. It is for 40 horsepower automobiles, to be run before May 15, the stake being 1,000 francs, to be given to the poor. The distance will be 220 kilometres (about 135 miles), but the route is not yet chosen.

Having made a start, "Willie" K. Vanderbilt evidently thinks he must keep up the pace. His match with Dr. Rothschild was no sooner arranged than a similar one was made, this time with M. Georges Prade, the editor of the Auto-Velo. Each will drive a Mercedes autocar for \$1.259 a side, the winnings to be devoted to charity. The course has not yet been settled on.

A recent accession to the force of John Wanamaker's automobile department is Charles R. Overman. He looks after the electric vehicle end of the line.

CONFUSED THE READING

Dispatches From Albany Gave Wrong Conception of Cocks Bill Scope.

The dropping of a line in the dispatches from Albany giving the text of the Cocks bill, which was signed by Governor Odell of this State on March 28, gave it a reading that was slightly misleading.

As it appeared in The Motor World last week, the bill read any person driving an automobile "at a greater rate of speed than is permitted by the ordinance of a city." As finally amended the bill really read, "at a greater rate of speed than eight miles per hour, except where a greater rate of speed is permitted by an ordinance," etc.

It will thus be seen that the measure is operative even where there is no local ordinance. The fact, pointed out by The Motor World last week, that the Doughty bill is still in effect, together with the Cocks bill, causes considerable confusion to exist as to the exact construction to be placed on both or either of the measures. To set this at rest, and to make the matter entirely clear, the law committee of the Automobile Club of America is at work on an authoritative interpretation of the automobile speed laws of this State. Their work is almost completed, and the report will be made public in a few days.

For the purposes of record the Cocks measure, which became a law on March 28, is herewith reproduced:

Section 1. Section 666 of the Penal Code is hereby amended to read as follows:

Sec. 666. A person-driving any vehicle upon any plank road, turnpike or public highway, who unjustifiably runs the horses drawing the same, or causes, or permits them to run, or who drives or operates an automobile or motor vehicle, whether the motive power of the same be electricity, steam, gasolene or other source of energy, upon any plank road, turnpike or public highway within any city or incorporated village, at a greater rate of speed than eight miles per hour, except where a greater rate of speed is permitted by the ordinance of a city, or upon any plank road, turnpike or public highway outside of a city or incorporated village at a greater rate of speed than twenty miles per hour, or upon any bridge at a greater rate of speed than four miles per hour, is guilty of a misdemeanor, and shall be fined for the first offence not exceeding the sum of \$50, and for the second offence not exceeding \$50, or by imprisonment for a term not exceeding six months, or both.

With the formal opening of the season the Automobile Club of America has instituted a system of club attendants. There is now on duty at the club from 12:00 o'clock noon until 11:00 o'clock p. m., an attendant to take charge of automobiles that may be left on Fifty-eighth street.



The Motor World.

PACEMAKER WAS PROVIDED

And Speeding Was Tabooed at Opening Run of A. C. A. to Ardsley.

It was none too optimistic a prognostication that the clerk of the weather had to make for Saturday last, and while the sun did succeed in emerging from behind the big masses of clouds now and then it was just as often hidden by them. This rather dubious outlook and the fact that it was so early in the season perhaps accounted for the unexpectedly small attendance at the first run of the Automobile Club of America.

It was an animated scene at Fifty-eighth street and Fifth avenue, however, and what the gathering lacked in quantity it made up, in a measure, in quality. President A. R. Shattuck and Treasurer Jefferson Seligman headed the list of club celebrities, while General Roy Stone and M. Ernest Cuenod performed a like service for the distinguished visitors of this and foreign countries. Altogether some sixteen vehicles and about three times that number of automobilists took part in the run. Rather more than the former number of photographers were present, and it was dollars to doughnuts that no vehicle escaped being snapshotted at least once. One group, consisting of three knights of the camera, reached the starting place about ten minutes after the first vehicle had gone, and had their trouble for their pains.

Almost as many makes of automobiles were represented as there were vehicles. The gasolene type predominated, with steam making a fair showing. The strength of the foreign contingent was strikingly shown, the Motor World man noticing Panhards, Mercedes, Puegeots, Georges Richard and Rochet & Schneider vehicles among the starters.

Of the home product there was a new Winton touring car, with tonneau body, in charge of Percy Owen; a new Packard two-passenger touring car, with G. B. Adams in control; a White, a Locomobile and an Overman steamer, and a Gasomobile, a Haynes-Apperson and an Oldsmobile.

Promptly at 10 o'clock the official pacemaker. President Shattuck, who was garbed in a long, grayish coat with a pleat in the back, reaching to the top of his khaki colored leggins, began the thirty-five mile journey to Ardsley. The run was made over good roads, the distance being covered in a little over two hours, the first comers arriving there at 12:15 o'clock. The route was through New-Rochelle, Larchmont, Mamaroneck and White Plains.

After luncheon the return trip was started, with Jefferson Seligman as the pacemaker. A new route was taken, through Hastings, Yonkers and The Bronx, and then down Jerome avenue and over Central Bridge. The automobilists were equally fortunate on the return trip, none of the machines breaking

down. The distance covered on the return was twenty-eight miles, and the trip was made in a little less than two hours, the party leaving Ardsley at 3 p. m. and arriving at the clubhouse before 5 p. m.

Some of those who took part in the run were A. R. Shattuck, Major H. K. Bird, A.



GENERAL ROY STONE.

Twombly, Jefferson Seligman, General Roy Stone, Lord Munson, B. Guggenheim, F. B. Cochrane, Percy Owen, M. W. Lord, George



ONE OF THE NEW MERCEDES.

Pettingili, George B. Adams, J. M. Ceballos, W. R. Beers, Ernest Cuenod, J. A. Kingman and D. E. Rianhard.

Rhode Island Wants to Know.

Considerable surprise has been created by the knowledge that the Rhode Island Automobile Club is much opposed to the fee of \$3 per member required for membership in the American Automobile Association.

It is said that why such a large sum of money is required by the association cannot be readily understood. The present plan requires \$3 to be paid for every member in a club, and although this may not be a serious drain on the club, the members do not see any great benefits to be derived. When the association was proposed the general idea was that the clubs themselves could do most of the work, and the association would simply back them up in matters of national importance. Racing matters could be handled by the association and rules formulated for its government.

COMMISSIONER IS CORNERED

Forbids Part of Park to Automobilists and is Brought up Sharply.

There is such a thing as being too courteous, too willing to yield up a portion of one's vested rights. Such is the feeling of not a few Long Island automobilists at the present time.

It all arose from the willingness of the Long Island Automobile Club members to meet the Br. oklyn Park Commissioners more than half way. Shortly after the passage last year of the Doughty law granting automobilists the use of public parks, etc., the club passed a resolution to the effect that it was good policy for automobilists to confine themselves to the West Drive in Prospect Park, and binding themselves to do this. The plan worked admirably, and the owners of fractious horses were permitted to monopolize the East Drive.

A short time ago, however, Park Commissioner Young issued an order forbidding automobilists the use of the eastern driveway. He followed it up by having signboards erected in conspicuous places, warning motor vehicle users to keep to the west.

Accordingly the Long Island club has appointed and will send a committee to the Park Commissioner to call his attention to the law and to protest against his action.

"When the highway law was passed," said Frank G. Webb, a governor of the club, "though it gave motor vehicles access to the parks on the same basis as other vehicles, our club passed a resolution that we would keep off the eastern driveway and use the western road exclusively.

"We did this by way of courtesy to the drivers, but had no intention of surrendering any of our rights under the law. We claim the same rights as other vehicles, and shall protest against the issuance of any such order as this as a matter of right."

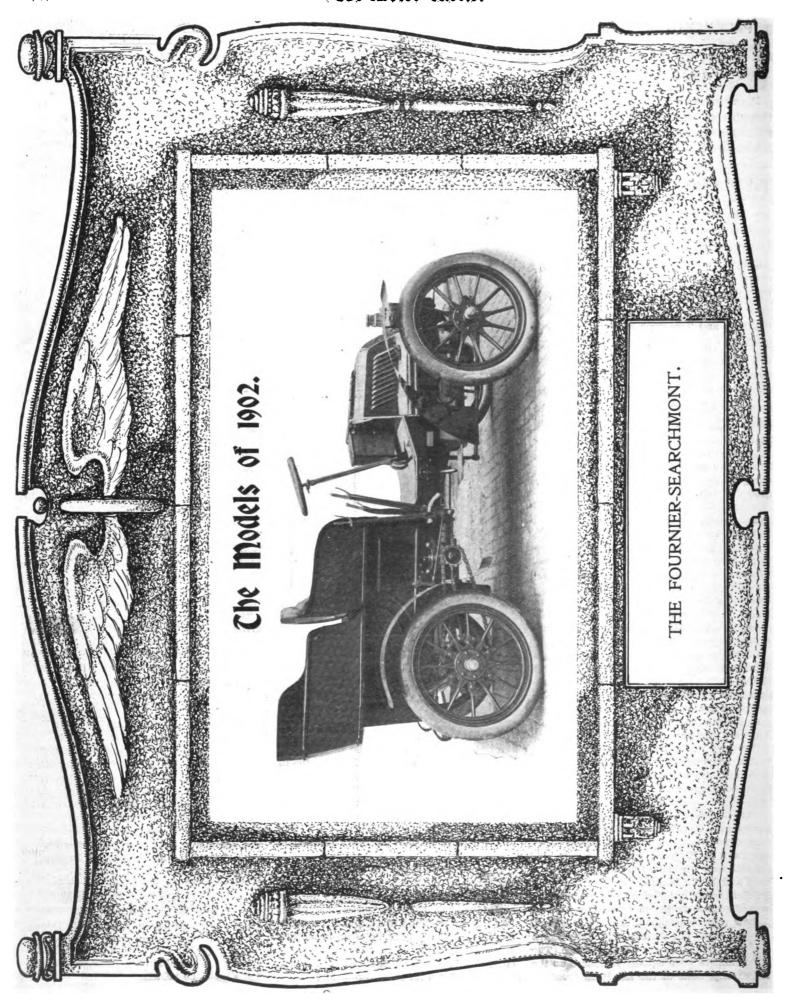
Wants Bids for Roads.

It is announced that State Engineer Bond of New York will soon advertise for bids for the construction of 186 miles of improved roads under the Higbie-Armstrong Good Roads law of 1898, for which the recent legislature made possible the expenditure of \$1,600,000, half of which is to be borne by the State and half by the localities.

In all 65 roads are to be improved during the coming year, the number of miles in each county being: Albany, 8; Broome, 3; Chenango, 5; Cortland, 2; Erie, 25; Fulton, 5; Monroe, 49; Montgomery, 12; Oneida, 5; Onondaga, 7; Orange, 26; Rensselaer, 6; Rockland, 6; Schenectady, 2; Tompkins, 2; Ulster, 19; Washington, 7.

It is reported that the Fanning Mfg. Co., Chicago, Ill., will shortly place on the market a gasolene vehicle.







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NEW YORK, APRIL 10, 1902.

Adequate Braking Facilities.

The appearance here and there of a sprag on automobiles in this country inevitably leads to a consideration of the subject of brakes, and to the question whether American practice in this respect is all that it should be.

It may be safely assumed at the outset that there are plenty of vehicles which are provided with efficient brakes, and enough of them to leave a good margin of safety. The positive knowledge on this subject is reinforced by that of a negative kind, viz., if such were not the case there would be evidence of the fact, evidence due to runaways and other accidents which could not be concealed.

The fact that there is no such evidence settles the matter. For there are in the path of most automobilists hills of sufficient steepness and length to put the matter to test; and no amount of skilful handling, reversing of engines or the use of other expedients would prevent mishaps.

Nevertheless, there is a real danger to be

apprehended, and of a twofold kind. It is due to overconfidence—an optimistic view of the matter on the part of both user and maker.

The latter will sometimes steer too near the danger line. By providing for normal conditions he may think that he has done enough. The braking of a motor vehicle on the average road, and on an exceedingly hilly one—not to mention those found in mountainous sections—are very different propositions. The regulation brakes may afford a margin of safety on the first; on the second they become dangerously inadequate.

Sometimes the trouble is with the user. Overconfidence, born of continued immunity from mishap, succeeds a proper regard for safety. The pitcher that has gone so often to the well is finally broken.

We have seen operators discard all but one brake, and adjust even that so it will not take a good hold. This on ordinary runs, and with the plea that with the proper adjustment there was too much friction. Thus equipped the vehicle has been driven recklessly in heavy traffic, and not even the narrowest kind of escapes has availed to teach greater caution.

On the other hand we have known users to complain of inadequate braking facilities. Those provided by the maker were all right on ordinary roads; but let a hill of unusual steepness be encountered, and the penalty of using the brake with sufficient effect to keep the speed within reasonable limits has been the burning of the band strap. Complaint to the makers has simply brought forth the stereotyped reply that no one else has any complaint to make.

Notwithstanding the improvement that has taken place within a year in this respect there is still much to be done ere perfect safety is obtained.

Two good brakes seem none too many for any vehicle, and one in reserve, and if of tremendous power, will not be too much for the automobilist who is at all timid.

Here's the Remedy.

New brooms sweep clean, of course, and it is much too early to say that the simple expedient of putting in a pacemaker solves the question of speeding on club runs.

Nevertheless, it is quite evident that here is the remedy, ready at hand whenever it is desired to apply it. The pacemaker can check speeding most effectually; just as he can, if he so desires, encourage it or lead in it. But in the latter case it is easy to fix responsibility.

The pacemaking innovation settles another thing, too. It insures the maintainance of a greater distance between the vehicles.

If the passing of a vehicle ahead is removed from the possibilities there is no special reason why the one behind should stick to it as closely as a brother. By so doing its occupants are presented with clouds of dust as big as the state of the road and the speed of the leader cause to be distributed most effectually. But there is nothing to compensate for this, no exhilerating rush resulting from the endeavor to go by. And, lacking this, much of the desire to stay close will disappear also.

But there need be no more fear that such runs cannot be controlled.

Tools and Other Equipment.

Most excellent is the complement of tools now furnished with automobiles, and at first blush there would seeme to be little that could be criticised on this score. Yet a little thought will bring the admission that there are two devices which could be included with profit to all concerned.

The present equipment includes everything needed from the mechanical standpoint of running, but for gasolene vehicles there could be added a battery tester and a gasolene tester. The lack of these at times has caused many an automobile owner to condemn a vehicle that was really without fault, the cause being outside. The supplying of these two testers will save many letters of complaint and much extreme vexation, to say nothing of time and postage.

At first blush it may seem that the cost of these two. no matter how small, would militate against their being included in the regular equipment. A little study of the matter should, however, convince that such is not the case. The determining factor in increasing the sales in any one community will be the satisfaction given in the use of the first automobile in that community, and any aid that the maker can furnish to that end will be a most excellent investment.

Too often has it been because the first buyer at any one point was forgetful or careless of the instructions sent him regarding battery and gasolene that he not only became discouraged, but discouraged others, either by the exhibition he gave or because he took particular delight in condemning something he, as a matter of fact, knew nothing about.

Had he been supplied with the visual re-

minder of the two testers, they would have appealed to him by their very presence. In place of making bitter complaints, even sending for an expert at times, only to learn that the battery had been bled to death or that the gasolene was of such poor quality that it would not gasify, the error or errors would have been located.

As 90 per cent of the novice's troubles are electrical and 7 per cent from gasolene, the needs for such consideration as here suggested are self-apparent, not only in their application to regular equipment, but as applied to many of the outfits gotten up by specialists, who seem to frequently overlook these two small but important bringers of peace to stranded automobilists.

Some Interesting Experiments.

One of the most remarkable movements in connection with the development of the motor vehicle is the widespread desire that appears to exist for automobile 'bus or stage lines.

If all of those projected or contemplated were put through it would be a difficult matter for the industry to supply the demand for vehicles. It is probable that even as far as actual business is concerned there is a market for pretty nearly all the vehicles of this sort that are available.

But it is evident that a large margin must be allowed for the projects of this sort which fail to come to anything.

The field early attracted the professional promoter, and at one time he seemed to be in a fair way to make it entirely his own. The plan was to float a company to purchase and operate a line of the sort, boom it extensively, sell stock and recoup themselves before anything was actually done in the way of operation.

This phase of the movement is nearing an end, however, and the late comers really mean business.

Usually they are local capitalists or business men who, seeing the need of a means of communication between towns or villages not reached by the railroads or trolley lines, bestir themselves to supply the deficiency. Usually such lines, if put in operation, will displace ancient stages or backs which have plied a none too remunerative trade, notwithstanding the fact that more business is in sight and can be secured.

Such business an up to date service, such an automobile line, would acquire without the slightest doubt. Furthermore, the

by the new service instead of being checked by the present bad one.

There are dozens of concerns of this sort that are investigating the subject, in addition to the considerable number that have already made a start.

The workings of the new lines are being watched with interest, and if successful it is not easy to set bounds to the progress of the movement.

Twisting to Fit.

There is nothing like fitting facts to one's own point of view. It frequently serves to point a moral that would be quite lost in the shuffle if it were not dexterously steered in the desired direction. A good example of this is the Tribune, which views the pernicious activity of the police of this city in the matter of making arrests for alleged excessive speeding in this wise:

"The epidemic of speed law violations, if we may so describe it, on Sunday last was highly significant. It was from one point of view disheartening to lovers of law and order, inasmuch as it followed closely upon the enactment of a measure generously framed in the interest of fast driving. Certainly it seemed most ungrateful for men to celebrate the increase of the legal limit of speed by grossly and wantonly exceeding that increased limit. There was also an encouraging feature of the case in the disposition manifested by the magistrates to inflict rigorously the full penalty of the law upon all offenders without fear or favor. The new law happily increases the penalty, and it was most commendable to see magistrates eagerly turn to it in order to punish as severely as possible the offenders before them.

The significant feature of the case was, however, its manifestation of the mania which we may call speed madness, which seems to possess a considerable part of the community. This is a craze for going faster than the law permits. If the legal maximum were only four miles an hour these lawbreakers would probably be satisfied with a speed of five miles. If it were increased to sixty miles an hour not one of them would be happy until he was moving at the rate of sixty-one. To paraphrase an historic saying, too fast is just fast enough. The passion is one for forbidden fruit. It is not that the fruit is sweet or that they are hungry, but simply that it is forbidden. It is not that they so greatly care for driving, or that high speed has a fascination for them, but that they love to feel that they violating the law-doing what they have no right to do,"

kir With an imposence that is worthy, of the "heathen Chinee" the Tribune assumes that

with the affixing of the Governor's signature to the Cocks bill automobilists, with a truly remarkable unanimity, let out a few links, seemingly for the purpose of seeing how close they could come to getting arrested without doing so.

The truth is that these alleged lawbreakers are driving just as they have always done. The change is in the police. They consider it "up to them" to make a showing, and they cannot help it if innocent motovehiclists are gathered into their nets. When the excitement has died away and automobilists have ceased to be singled out from other users of the streets and terrorized, as is now being done, nothing more will be heard of the matter.

Even now the vigor of the crusade appears to have diminished considerably.

The arrests of automobilists still continue, and in all probility will do so for some time. But the first fury of the police—no less than that of the magistrates and the newspapers—has been spent. The proverbial nine days has elapsed, and it is full time for a new issue to arise and furnish food for talk and provide the authorities with a fresh excuse for the further exercise of that strenuousness which has been so much in evidence of late.

What's the use of being a king if you can't have things to suit you? Here is the Italian reigning family from the king down devoted to the pastime of automobiling, and losing no opportunity to indulge in it themselves, or to encourage others to do likewise. And along comes a pesky Minister of the Interior, a mere Count something or other, and with a stroke of the pen stops the opening race of the year and the most important event scheduled to take place on Italian soil. Amid the storm of indignation that breaks around him he simply "stands pat"; while the king is unable to help matters or deems it unwise to raise his hand.

It is a pretty active automobile annex that can turn out three dozen vehicles for an opening run, as did the motor vehiclist members of the New-York Athletic Club on Sunday. Most of the regular automobile clubs would have a hard time making a like showing. It is a good line on the present season, and forebodes an unexampled activity.

And now they say that "chaffeur" is the French for stoker, and that the term was first applied in derision. This is a blow that the word will hardly survive.



Washington's Second Yearly Show a Success

Washington, D. C., April 8.-When Lieutenant General Miles, president of the National Capital Automobile Club, stepped to the front at the balcony in the Washington Light Infantry Armory last evening to formally open the second annual automobile show the scene which he witnessed was one never equalled before in any trade display made in Washington. It was brilliant in the extreme, for the hall was aflame with light and color, splendid examples of automobile construction were to be seen on every hand, and the spectators were among the best known people in the nation's capital city. The scene that greeted General Miles's eyes must have been an inspiration to him, for his remarks were timely and were received with applause. He said in part:

"I think we can and should greatly appreciate the enterprise of these gentlemen who have contributed so much of their energy and skill in bringing before us this evening something of the most wonderful genius, something of the most modern construction in the way of automobiles. There are more than sixty machines of different manufacture before us this evening, representing a money value of something like \$100,000, some coming from different parts of the United States and a few from France. We have now reached the height of progress in the world's history of invention, and our automobile inventors have contributed not a little to this wonderful history of invention. Their genius has resulted in the manufacture of vehicles that not only embody luxury and comfort, but bring us usefulness as well.

"We begin to realize that the age of that humble and faithful servant, the horse, is a thing of the past. I trust that it will ever remain so. As much as it was an object of convenience and pleasure, and to me affection, it also had its misery, and for the last reason I am glad its day as a work animal is over. The advent of the horseless carriage has taken away the horse's burden, and for this all true lovers of the horse are devoutly thankful."

SHOWS LEADS TO PERMANENCY.

The show is given by the Washington Automobile Dealers' Association, and has the approval and indorsement of the National Capital Automobile Club. The association was brought into existence ostensibly to give this show, and was to have been dissolved when that object had been attained, but at the several meetings held prior to the show it, was demonstrated by the exchange of opinions and ideas kindred to automobile subjects that there was such a thing as community of interests even in the business of sectionobile competition, and it was therefore

decided to perfect a permanent organization.

The show was opened under moist auspices, for a heavy rain fell throughout the evening, but if the attendance on the opening night can be taken as a criterion it will take more than rain to dampen the ardor of the visitors. It will be against all omens and predictions if the attendance during each afternoon and evening does not pack the hall. The nation's capital can boast of some of the most extensive and beautiful boulevards and driveways to be found in any American city, which are fast making Washington a most favored automobile city. The automobile has come largely into the social life of the city, and is daily increasing in use, especially for pleasure purposes. Indeed, so much interest is being manifested in the subject of automobiles that the dozen or more dealers doing business here have little fear but that with the stimulus afforded by the show they will have about all they can do in supplying the demand for vehicles during the next two months.

CONVENIENT LOCATION.

The building in which the show is being held is most accessibly located in Fifteenth street, just around the corner from Pennsylvania avenue. Washington's greatest thoroughfare, and its convenient location will no doubt have a good effect upon the attendance. The armory is a roomy structure, 120 feet long and 100 feet wide, the ceiling being supported by a row of five columns running through the centre of the hall. It has been the scene of many brilliant exhibitions, ranging from bicycle shows to food shows, but it never contained a more representative crowd than that which thronged the aisles last evening. Conspicuous in the throng were Senator Clark, the Montanna millionaire, known to fame as the owner of a \$10,000 French machine; Representative Sibley, of Pennsylvania, another millionaire statesman and an automobile enthusiast of the most pronounced type; Chekib Bey, the Turkish Minister; Captain Jewell, commander of the United States cruiser Minneapolis; Representative Flynn; Señor Don Manuel Torres, Yung Kwai, interpreter of the Japanese Legation, and several attachés of the Chinese Legation.

The decorations and electric effects are as fine as the skill and ingenuity of the professional decorators could possibly make them. Imbedded in the ceiling are row after row of electric lights, shedding a light that is positively dazzling in its brilliancy, while the immense electric signs displayed at various booths stand out in bold relief against the immense flags and festoons of varicolored bunting falling in graceful folds from the ceiling to the floor. In some of the booths festoons of smilax are used for deco-

rative purposes, while in others cut flowers and palms are used.

The following are the exhibitors:

Automobile Storage & Repair Co., showing Baker electrics, De Dion-Bouton motorettes, Pierce motorettes, Crestomobiles and a full line of automobile equipments and electrical supplies.

Buffalo Electric Vehicle Co., Buffalo, N. Y. Electric Vehicle Co., Washington Electric Vehicle Transportation Co., local agents, Columbia electrics.

Chas. E. Miller & Bro., Reading steam carriages.

Oldsmobile Co. of Washington, Oldsmobiles.

Capital Automobile Co., Darracqs.

Friedman Automobile Co., Chicago, Ill., Friedman hydrocarbon automobiles.

Automobile Co. of America, Jersey City, N. J., gasmobiles.

National Vehicle Co., W. C. Koller Carriage Co., local agents, National electrics.

International Motor Car Co., Toledo, Ohio., Toledo steam carriages, Waverlly electrics, Columbia motocycles.

United States Long Distance Automobile Co., Washington branch, United States long distance automobiles and Standard marine engines.

W. C. Koller Carriage Co., Locomobiles and Rambler gasolene vehicles.

Salamandrine Boiler Co., Salamandrine boilers.

Rose Mfg. Co., Neverout automobile lamps. B. E. Dakin, automatic speed regulators and safety locks.

Diamond Rubber Co., Diamond automobile tires.

Fisk Rubber Co., Fisk automobile tires. Porter Battery Co., batteries.

George R. Snodeal, Baltimore, Md., patent mobile hub and knuckle.

American Electric Vehicle Co., A. J. Joyce Carriage Co., local agents, American electrics.

John C. Rau, electrical supplies for automobiles.

ONLY TWO TARDY EXHIBITS.

The exhibits of the National Vehicle Co. and the Friedman Automobile Co. failed to arrive in time for the opening night, but reached Washington late on Tuesday afternoon and were immediately installed. Aside from these two non-arrivals every stand was in complete order when the doors were opened for the first time. The fact that the display was clean and orderly in every respect, in striking contrast with the usual run of exhibitions on the opening night, elicited many complimentary remarks from the visitors.

The great feature of the last automobile show held here was the track. This attrac-

tion is lacking this year, but it will not be missed very much, for just across the street from the armory is the White House ellipse, five-eighths of a mile in circumference, where demonstrations will be made during the progress of the show. Guessing contests, a raffle for an automobile to be selected from ten of those on exhibition, band concerts every afternoon and evening, and other attractions have been provided for the entertainment of visitors. The raffle promises to be a very successful affair, and is expected to stimulate the attendance. Already several thousand tickets have been disposed of at 50 cents each, and at the rate they are going none will remain unsold when the drawing takes place on Saturday afternoon. The drawing will take place at a popular resort outside the city, and it is probable that a big automobile run will be made to the place. The result will be announced on the last night of the show.

Another striking feature will be the automobile parade arranged by the local automobile club. It will take place one afternoon of this week, and a large number of entries have been received, including those of a number of society people, who will make a determined bid for the handsome prizes offered by the local newspapers.

SOME NEW VEHICLES

It was hardly to be expected that there would be any great number of novelties shown at the local exhibition, the New York and Chicago shows having drawn out about all that was new in motor vehicle construction. However, there are several machines that have never been shown before, and they have come in for a great deal of attention. Among them is a "4C" touring car, shown by the Automobile Co. of America. It is the first of this type to be manufactured by the company, and is now the property of W. F. Norton, a prominent New York broker. The vehicle is not unlike the accepted foreign type, and is a powerful, high speed touring car, with a seating capacity that is roomy and comfortable. The design of the detachable tonneau body is graceful and artistic. The engine is of the four cylinder type. Probably no vehicle shown here has been more admired than this touring car.

A Washington machinist has come to the front with a device that is destined to achieve considerable success. It is known as the Dakin auto lock and speed controller, and is the invention of B. E. Dakin, of this city. The speed controller is designed to protect the operator from arrest for fast riding. The index plate can be set so that the operator cannot obtain a greater speed than four miles an hour, or it can be set so that any speed the vehicle is capable of can be maintained. The lock acts as a safety guard against accidents, theft or mischievous people.

Too much praise cannot be given the executive officers of the association for the admirable manner in which they have accomplished the difficult task of arranging the show. The officers are as follows: A. L.

Cline, president; S. S. Olds, jr., secretary; W. J. Foss, treasurer, and B. C. Washington, general manager.

Notes.

The centre of attraction at the show is the immense electric sign displayed at the Oldsmobile booth. The sign is a representation of an Oldsmobile traced in red, white and blue electric lights, which is mounted on an iron column and is revolved by a belt attached to an Oldsmobile motor. Mr. Olds, the inventor of the Oldsmobile, was a visitor during the first two days of the show.

The stand of the International Motor Car Co. is pronounced to be the handsomest at the show. It occupies a large block of space at the rear end of the hall, and is decorated with a lavish taste, flags, smilax and electric lights being used for this purpose. Manager Foss of the company is secretary of the local automobile club, and treasurer of the dealers' association.

The Fisk Rubber Co. have a big display of tires, made through their local representative, D. L. Scovill & Co. Mr. Dunn is in attendance, and it goes without saying that Fisk tires will come in for their share of attention.

Springfield's Opening run.

Five automobilists, members of the Springfield Automobile Club, braved muddy roads and chilling winds on Sunday and ran over a thirty-five mile triangular course, going first to Westfield, thence to Holyoke and to the foot of Mount Tom and then back to Springfield.

The trip to Westfield was made in thirty-two minutes over a fairly good road, but on the road via Ashley Ponds to Holyoke the automobilists had their troubles, as in many places the mud was several inches deep. All of the machines proved equal to their task, however, and there were no stops for repairs, and finally the five reached the foot of Mount Tom on the road to Easthampton. Here they turned and started back to the city, with good roads, but chilling weather, in contrast to that with which they started.

No Regret Wasted.

In consequence of amendments which were made almost at the last minute to the automobile measure before the Rhode Island legislature, its non-passage was not regarded with any great concern by motovehiclists of that State.

The change consisted in placing the legal rates of speed at eight and ten miles per hour, the latter being the maximum allowed anywhere. This was, of course, extremely unsatisfactory, especially in view of the fact that a prison penalty for violation was provided. As originally drafted the bill permitted speeds of eight and fifteen miles, and in that form was favored by the Rhode Island Automobile Club and other automobilists.

The bill failed to reach the Senate, and the Assembly adjourned without passing the bill, which had been made objectionable by the above amendments.

Who Wants to Tour 'Round the World?

It appears that the widely heralded "around the world" trip of Messrs. Lehwess and Cudell is really to take place, and, furthermore, that the journey is worthy of more attention than was at first thought.

The start is to be made the end of April, and the vehicle, which is a 25 horsepower Panhard-Levassor, will be christened "Passe Partout." The back portion of the vehicle will be of the modified 'bus pattern and transformable into a sleeping compartment, so that the tourists will never be at a loss for shelter when they get away from the confines of civilization. The roof is continued forward right over the front seat, so that protection is afforded there as well.

On the top, which is very strongly built, the luggage of the travellers will be carried. Apart from the necessities of the route, sporting requisites in the way of guns and fishing tackle will be carried, and the route is planned through European and Asiatic Russia and China. Sea passage will be taken to Japan, and again from there to San Francisco, a break being made on the way at the Hawaiian Islands. From San Francisco the tourists will drop south into Mexico, and then work their way up the sea coast to New York. They will then cross the Atlantic and drive back to their starting place in London.

Further details of the journey will be announced later, and it is hoped that other automobilists may join in at different points on the route. It is said that a place in the "Passe Partout" can be found for a good sportsman who would like to make the trip.

To Sail the Land.

What is characterized as a "land battle-ship," being a motor war car built by Vickers's Sons & Maxim, the famous British firm, the War Office inspector reports very favorably.

The frame of the car is rectangular and of heavy steel. The car supports a maximum lond of twelve tons. Its overall dimensions are 17 feet by 6.2 feet, and its engine is of sixteen estimated horsepower.

It has a four cylinder hydrocarbon engine of the Daimler type. The fuel is petroleum, and the storage tank enables it to cover 200 miles without replenishing. It has four rates of speed—one and a half miles, three, tive and nine miles an hour, which can be increased by 25 per cent by an accelerator. The car is driven and steered by one man.

The frame is entirely enveloped in Vickers steel six millimetres thick. This screen is a crinoline shaped ram fore and aft. The extreme length of the armor is 28 feet. The beam is 8 feet and the height 10 feet. The cars are constructed for use both on railways and open roads.

J. P. Schneider, No. 604 Michigan avenue. Detroit, has opened a branch store at No. 189 Jefferson avenue.

There are seven hundred licensed chaffeurs in Chicago,





Of course, picric acid motor acceleration is all well enough for foreigners. I will even admit that, for them, the idea is really quite progressive, but when you want the really a-couple-of-days-beyond-tomorrow affair you have got to come right over here, whether you want to or not. It is a way we Americans have, and we can't break ourselves of it. Our education in the national game always prompts us not only to see the other fellow, but to go him one better, even if we go broke doing it. So when the foreigner played the "picric acid" trump, thinking it was the right bower of the game, we had to produce the joker, labelled "nitro-glycerine," or else confess we were beaten. Well, thanks to Mr. Myers, of Bowling Green, Ohio, we are enabled to produce this joker, and since more the American eagle scores over the

Mr. Myers all his life has been a manufacturer of nitro-glycerine, and probably knows as much as any living man about it. A number of other men have gone a bit further-skyward-in their investigations of what nitro-glycerine will and will not do, but as none of them has ever returned after his going Mr. Myers is still the best living authority upon this very forcible stuff. To make nitro-glycerine is not nearly as difficult as it is dangerous. All you have to do is to take three equally harmless things-glycerine, nitric and sulphuric acid-and mix them; the result is either a funeral or nitro-glycerine, according to the luck of the mixer. Now, what Mr. Myers claims he has done is to store these three ingredients each in a separate tank; then mix them drop by drop, exploding each drop as it is mixed in the cylinder of the motor-and there you are,

To hear Mr. Myers tell of the success he has achieved with this bang-up explosive motor of his is very interesting, when the motor and the man are at least a mile apart, but when he seeks to decrease this distance so as practically to demonstrate his theories he has invariably found great difficulty in retaining either the attention or the attendance of even his best friends. Some way, even the most rabid explosive motor advocate appears to draw the line of his rabidness just a bit this side of sitting over a lot of machinery while it is busy making nitro-glycerine, even homoepathically. You see, you never can tell when the cussed thing might become converted to allopathy, and then-well, you'd know a mighty sight more about the hereafter than most men are anxious to learn.

What did I tell you about the vehicle which was to appear bearing the same name as the half and half monthly? Well, it has arrived, just as I said it would; and now it is up to the gentlemen who have been paying

\$80, more or less, per page to make the name known to scratch their heads and wonder where they are at and why.

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Some day a smart man is going to put on the market a folding motor vehicle, and when he does he is going to get rich, provided the usefulness and stability of the vehicle are not entirely sacrificed to making a collapsible affair out of it. There are hundreds of places on land where such a vehicle would prove invaluable, while on the water there is a perfect gold mine just waiting for such a vehicle to come along and work it. It is estimated that the yachting fleet in and around New York City alone represents an investment in excess of \$10,000,000. In all this costly fleet of pleasure vehicles there is hardly a boat of any size which would not include at least one automobile in its equipment if such a convenience could only be supplied in some shape which would permit of it being easily transported to and from the vessel and snugly stored when kept aboard. The yacht owner denies himself nothing which will add either to his comfort or his pleasure, nor does he allow the expense thereof to stand in his way when the thing he wants is obtainable.

Passing beyond this pleasure fleet to the boundless possibilities of the navies and the merchant marine of the world, it will be seen that the idea I have outlined is well worth the attention of even the brightest minds. Given a practical vehicle which in trade parlance can be "knocked down" into some shape convenient for storage and transport, and the motor millennium is in sight. So important is this demand for a compact automobile that I believe, until the present, mankind never really appreciated just what a lot of trouble the man who owned the white elephant had. Now, almost every owner of a motor vehicle in a big city has times when he thinks of that elephant proprietor and to himself profoundly says, "Me,

Some way the dead past of overcapitalization in the automobile field refuses to bury its dead, with the result that there are yet in sight several unsightly defuncts which it would be better for all concerned if they were cremated or otherwise disposed of.

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Dealing in the foregoing with that bale-ofhay motor, the elephant, reminds me of the circus and something in connection therewith. The great attraction at the performance now taking place in Madison Square Garden is the valiant attempt that a Coney Island ex-barber makes to join the angels by looping the loop while mounted on and pedalling a bicycle. It would seem as though the barber-that-was and looper-that-is had in this performance reached the very limit of reckless foolhardiness, but he hasn't. The barber is only in the primer class; the high school scholar is preparing to show the barber and the public just what real life-risking loop looping is. To do this an individual has

applied to the professor of applied mechanics at Columbia University, asking him if there is any law in physics which would prevent the looping being accomplished by and in an automobile. It is expected that if the reply is favorable—and I for one can see no reason why it should not be so-we will see the present bicycle looper return to his strop and his lather while his place as an attraction and a shining mark for the fool killer will be taken by the individual who hopes to secure the speed necessary to loop the loop from motors, not muscles. How he is ever going to get a motor which will not slop over when it is turned upside down is one of those minor details which will have to be left to the fool killer's favorite when he prepares to do his looping.

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The more I hear people criticise the automobile, the more I am convinced that there are more mouths that talk than there are heads that think. Apparently, most of those who are really unacquainted with the motor vehicle are unable to distinguish between what they think they know about it and what they know they think about it.

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One of the best paid men I know is an "organizer." To go around the country "organizing" the liquor dealers this man I refer to gets about \$10,000 a year and his "expenses," and the latter, like charity, covering a multitude of not exactly faults, "findings, would be a better word, perhaps. "Organizing," be it known, means to induce the liquor dealers to band together for their mutual protection and benefit. For each bander the organizer gets so much, and from the national organization an additional bounty is paid him when the local branch is duly organized and has settled its initiation fees, etc., with the national treasurer. From what I have heard there's an inclination on the part of certain people to extend this "organizing" profession to other trades.

I'm not mentioning any names nor am I looking where I'm pointing, but all the same I know where a man was offered the job of "organizing"-well, we'll call it the wheelbarrow makers, just because that isn't it. The offer was to pay him a good fat commission on every wheelbarrow maker he induced to join the wheelbarrow makers' national association. The deal never went through, because my man couldn't see much outside of hard work and a little glory in it for him. Some way I cannot believe that a trade or a guild which does not come into existence through a spontaneous recognition of its necessity on the part of those it is to benefit can ever amount to much. What has all this got to do with automobiling? Well, if you wait for me to answer you'll wait a long time. If you can't see the connection without my aid you'll remain in darkness for quite some time yet. It's my business to tell the story; it's yours to find out what it's all about.

THE COMMENTATOR.



The Motor World.

Cylinder Jacket Circulation.

The maintenance of proper circulation through cylinder jackets is so essential that makers can hardly pay too much attention to this point, says a foreign automobilist.

Lately some tendency has been displayed to use natural circulation in lieu of forced circulation by pumps. The former plan has the advantage of being absolutely safe, but it has the disadvantage that, unless a proportionately larger quantity of water is carried and the coolers increased, the slower circulation results in higher cylinder temperature. High cylinder temperature, it is true, increases efficiency, but it decreases power, and as this latter is usually the desideratum in automobiles, pump circulation and low cylinder temperature are preferable, provided all danger from pump breakdowns can be avoided. The safeguard usually supplied is a float glass on the dashboard, in which the position of the float indicates the maintenance of the circulation. But at night this is not visible, and even in daylight the vibration of the vehicle interferes with the action of the float.

A very ingenious French method for indicating the piston water circulation in gas engines is to lead the discharge into a tank litted with a ball cock, connected with the gas valve. If the circulation fails the water level in the tank sinks, the ball cock fails, cutting off the gas and stopping the engine before any damage is done.

On somewhat similar lines the writer recently suggested to a firm with which he is connected fitting on the pump discharge pipe a lift valve so connected with the motor electric ignition or with the petrol supply, that as long as the cooling water circulated the valve and its connection remained in their normal position, but if the pump tailed the fall of the valve back to its seat broke the electric current or the petrol supply, and so brought the engine to a stop. By adopting some such method as this makers can provide against accidents arising from pump tailures.

To Purchase an Ambulance.

Last week the special committee of the Hartford (Conn.) City Council appointed to consider the matter of the purchase of an automobile ambulance for the use of the city made its report. It recommended that the vehicle be purchased from the Electric Vehicle Co. The report was accepted and the committee instructed to make the purchase for \$2,500, the amount appropriated for the purpose.

Plan Will be Carried out.

The automobile 'bus line to run between ('edarburg and North Milwaukee, Wis., referred to in last week's Motor World, appears to be an assured fact. The Cedarburg and Milwaukee Mobile Co. has been organized, and an order has been placed for two twelve-passenger vehicles, which will be ready for delivery about May 1. The route proposed is from Cedarburg through the vil-

lage of Hamilton, over the Green Bay road, through Thiensville, Brown Deer to North Milwaukee, where the vehicles will connect with the electric car line to Milwaukee. Passengers may go to any part of the city from North Milwaukee with through tickets.

Go by the Book.

There has recently been issued by the police department in Brussels a carnet or instruction book indicating the minimum time automobilists must occupy in going from one point in the city to another. Thus, if one is riding along the main boulevard of the city from the Bourse to the Boulevard Botanique, a reference to the instruction book shows that the distance is \$53 metres, and that the journey must not be made in less than three minutes and twenty-eight seconds.

ODDS AND ENDS.

- G. & J. tires are the subject of an attractive little booklet which the G. & J. Tire Co., Indianapolis, Ind., have just published.
- E. P. Brinegar, of the "Locomobile" Co. of the Pacific, San Francisco, is an Eastern visitor, having been in New York this week.

Complaints continue to be made in Buffalo of the excessive speeding of automobiles. A few accidents and many narrow escapes are said to have resulted from the practice.

J. C. Spiers has been made superintendent of the Autocar Co., Ardmore, Pa., and entered upon his new duties last week. Mr. Spiers was for a long time connected with the Locomobile Co. in a similar capacity, and is a well known figure in the trade.

A gratifying interest is being evinced in the 100-mile non-stop race of the Automobile Club of America. Already more than a dozen entries have been received, and the indications are that the list will be a large one.

Brandenburg Bros. & Alliger, No. 93 Lake street, Chicago, and No. 56 Reade street, New York, have been appointed general sales agents for the Clark detachable automobile tires, manufactured by the Clark Tire Co., Chicago. R. H. Croninger, of the latter company, is now in the East in its interest.

As the result of changes at the John Wanamaker retail establishment, New York, the automobile department has a largely increased space at its disposal. It is located in the Ninth street annex, and permits a most attractive display of the concern's extensive line. The most recent addition to the latter is the Mobile.

The International Motor Car Co., Toledo, Ohio, have got out some very attractive literature, describing their varied line of goods. These include "What the Papers Say," a collection of articles relating to the several long distance runs made by the Toledo steam vehicle, and others bearing on the new Toledo gasolene touring car, the Toledo steam carriage, the Toledo, Jr., etc.

Athletes Enjoy a Run.

For an opening run of the annex of a club of a vastly different character, the run of the automobile section of the New York Athletic Club, which took place on Sunday, was a gratifying success. Nearly twoscore vehicles started, carrying almost one hundred and sixty people.

The objective point was the club's country house at Travers Island, and the start was made at 10 o'clock, the destination being reached by the advance guard an hour later. The run was well conducted, and none of the machines were allowed to go ahead of the pacemakers.

The return trip was made to the city club-house in good order, most of the vehicles arriving at 4 p. m. The trip was voted a success, and will be repeated. Arrangements are already being made to construct a suitable automobile stable at Travers Island. If will be fitted with an electric recharging apparatus, and gasolene supplies will be on hand when needed. No arrangements have been made as yet for the storing of machines at the city clubhouse.

The route was through the East Drive of Central Park, up Seventh avenue, through Jerome avenue, to One hundred and eightyninth street, to Webster avenue, to Fordham, Pelham avenue and Pelham Bridge to Travers Island. Whitney Lyon was chairman of the road committee, acting with Thomas J. Regan and Frederick Vilmar.

Will Prevent Slipping.

It is reported that the authorities have under contemplation a new kind of asphalt to be used for resurfacing upper Seventh avenue, New York. It meets the complaints of horsemen and others that ordinary asphalt is too smooth, for it is claimed to be just rough enough to furnish a grip for the wheels of an automobile and yet is not so rough as to wear out tires. Even in wet weather skidding with an automobile will be impossible, and the pavement is of such a nature that atmospheric changes and moisture do not perceptibly affect its durability, according to report.

In the Middle and Extreme West.

It has been suggested that the success attained with the Truffault engine, in which cylinders of more than five-inch bore are used without any water cooling, is obtained, first, by running the machine through the air at such extreme speeds as to permit large quantities of air to strike the radiating fins of the cylinder; second, by making the cylinder walls thinner than usual, but of extremely strong material, and, third, by so timing the ignition as not to generate the extreme temperature obtained with early or premature ignition, and, fourth, due probably to the low compression.

It is expected that the New Jersey Automobile Co., Newark, N. J., will move into their new building, which is being especially remodelled for them. at 226 Halsey street, on May 1st.



The Motor World.

DESIGN IS DARING

This British Vehicle Looks Like a Gasolene But is an Electric.

Comparatively little, if a few tonneau types of bodies be excepted, has been heard of electric vehicles which depart markedly from the conventional types. A British concern, however, has taken the popular type of foreign gasolene car for its model, and turned out a vehicle which at first glance could not be distinguished from the former.

The concern in question is the British Electromobile Co., formerly the British and Foreign Electric Vehicle Co., who have produced a vehicle modelled after the "Powerful" car which made a number of long runs last year.

The frame is of channel steel construction. Two electrical motors are employed to drive the car, these being spring suspended on the

produced, with the following eight effects: R, reverse speed; B, electric brake; S, stop; 1, first speed forward; 2, second speed forward; 3, third speed forward; 4, fourth speed forward, and, 5, fifth speed forward. Each position of the handle is at an angle of 45 degrees with the next, and a simple mechanism renders it impossible to make an imperfect contact by leaving the handle in an intermediate position. The controller is adapted to be operated by the left hand of the driver, thus leaving the right hand free to control the inclined steering wheel. The connections for the recuperation of the battery are entirely outside the main controller. and are obtained by means of two pedals.

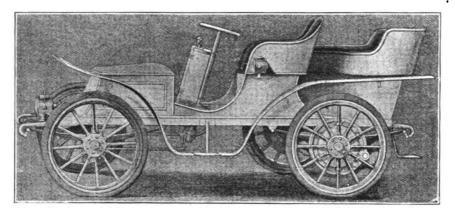
The vehicles are each equipped with three brakes-the emergency electrical brake applied through the controller, the medium electrical brake due to recuperation, and pedal operated band brakes on drums on the hubs of the rear road wheels. These latter brakes act equally well, be the car travelling in a forward or backward direction, and when

AT JEFFERSON'S HOME

Object Lesson in Good Road Building Given at Convention at Charlottesville.

Sentiment and utility both had a part in the National Good Roads Convention held at Charlottesville, Va., last week. The historic old spot fairly teems with memories of the nation's early great men, but it has little to boast of in the way of decent roads, even as measured by American standards. Mountainous, sparsely settled, decaying, that section of the Old Dominion had apparently little but the past to felicitate itself upon. All the more welcome, therefore, is the change that has been inaugurated.

The convention was held under the auspices of the National Good Roads Association, the United States Office of Public Road Inquiry and the Jefferson Memorial Road Association, and was significant as evidencing the rapidly growing recognition of the good



fixed rear axle, one at each end, pinious on the motor spindles meshing with large spur wheels connected to each of the rear road wheels, the power of the motors being thus conveyed to the wheels by a single reduction. To the top of the motors spiral springs are fixed, these springs bearing on brackets and so taking up any thrust of the motors. The spur gearing is entirely inclosed in dustproof oil containing cases. The accumulators adopted are the Leitner, the battery consisting of forty-two cells placed in compartments in the body of the vehicle. These receptacles are provided with hinged tops, so that the cells can be rapidly inspected or removed. The battery is adapted to be charged from mains giving a pressure of 110 volts and upward, and has a capacity, in the 8 horsepower car, sufficient for a run of sixty miles at an average speed of twelve miles per hour on one charge.

An interesting detail of the vehicle is the controller, which is now quite separate from the steering pillar, and set at a slight angle, so as to be within convenient reach of the driver. It consists of a revolving cylinder inclosed in a watertight aluminum case, the cylinder carrying a number of contact blocks, on which press a row of stationary contact fingers. As the handle of the controller is turned various electrical combinations are

put in action the electrical circuit is automatically broken.

The road wheels are of the artillery type. and are usually shod with solid rubber tires, the company finding these more reliable than pneumatics, which, however, they will fit if desired.

Brennan Coils and Plugs.

The Brennan Mfg. Co., of Syracuse, N. Y., which have met with splendid success with their well known Brennan motors, are now offering to the trade a complete line of motor accessories, including the Brennan tandem spark coil, in which the terminals go to the spark plug direct, thus avoiding the difficulty of handling a high tensioned current with a distributer, and being proof against any liability to short circuit. The Brennan spark plugs are made of the very best imported materials, and in the new plug a strong. compact shoulder gives it strength and satisfaction in use. The Brennan muffler, carburetter, transmission gear, etc., have all been thoroughly tested, and the makers offer them to the trade with full confidence in their in-

The agency for the Oldsmobile for Brooklyn. N. Y., has been acquired by the Maltby Automobile and Mfg. Co., 10 Clinton street, that city.

roads movement throughout the country. The Charlottesville convention marked the end of the tour of the Southern Railway "Good Roads Train," which left Washington last October, carrying road building machinery and road experts and made official stops at the following places: Winston, Salem and Asheville, in North Carolina; Greenville and Chattanooga, Tenn.; Birmingham, Montgomery and Mobile, Ala.: Atlanta, Columbus and Augusta, Ga.; Greenville, Columbia and Charleston, S. C.; Raleigh, N. C.; Danville, Richmond, Lynchburg and Charlottesville, Va.

Conventions were held at all these places, State and county good roads associations formed, and a sample of good road constructed at each place. The train covered some five thousand miles, congregated over fifty thousand people and constructed about thirty-four miles of sample road.

At Charlottesville men of National reputation addressed an audience of two or three thousand people throughout the greater part of three days, and nearly a mile of road was constructed, of what is to be known, when it is completed, as the Jefferson Memorial Road, running from Charlottesville about three miles to Monticello, the home and tomb of Thomas Jefferson.

On two successive days special trains from

Washington over the Southern Railway brought a large number of Senators and Congressmen to attend the convention. General Fitzhugh Lee, the president of the Jefferson Memorial Road Association, presided, and among the speakers were Senator Hanna, General Nelson A. Miles, Governor A. J. Montague of Virginia, Samuel Spencer. president of the Southern Railway; Stuyvesant Fish, president of the Illinois Central Railway; George Stevens, president of the Chesapeake and Ohio Railroad; Colonel W. H. Moore, president of the National Good Roads Association; the Hon. Martin Dodge, director of the United States Office of Public Road Inquiry; General Roy Stone, Colonel Joseph H. Brigham, Assistant Secretary of Agriculture; Commissioner Hermann of the United States Land Office; Secretary of Agriculture Hamilton of Pennsylvania, and Congressmen Littlefield, of Maine; Davis, of Florida; Tongue, of Oregon; Otey, of Virginia, and a large number of visiting Congressmen and departmental officials. The Automobile Club of America was represented by its secretary.

GOVERNMENT GIVES REASONS.

(Continued from page 41)

Some idea of the commercial injury wrought by the interdiction may be gathered from the fact that the Automobile Club de Nice alone spent 15,000 francs (\$3,000) upon the preliminary details, the entire length of the route having been gone over, the starting and arriving points established and road keepers, etc., appointed.

The secretary of the club, hoping against hope, refused to admit the possibility of the interdiction being maintained, while every effort was being made to bring all the influence obtainable to bear upon the Italian authorities to reconsider their decision. He professes to believe almost to the last minute that these efforts will ultimately be successful.

"It is outrageous," one contestant is reported to have said. "The Italian Government had a perfect right, of course, to refuse an authorization in the first place, but, once having consented, common courtesy and rudimentary honesty should have compelled it to honor its signature.

"As it is, the Automobile club, the manufacturers and the competitors have been allowed to make every arrangement—expend lavishly and make engagements that will entail still further expenses—and at the last moment the Italian Government withdraws its consent and prohibits the race, almost without a word of excuse."

The Week's Exports.

 ${\bf London-23\ cases\ motor\ vehicles\ and\ parts.} \\ \$10.170.$

Southampton—5 cases motor vehicles, \$5,000.

Venezuela-1 case motor vehicles, \$152.

Philadelphia automobilists to the number of 653 have been licensed by the city authorities.

The Motor World.

New Cap From Abroad.

Quite the newest and "smartest" caps which decorated the heads of the participants in the opening run of the Automobile Club of America were those worn by M.



Ernest Cuenod, the Swiss automobilist, and a friend, evidently from across the water also.

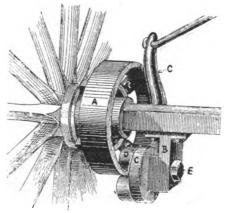
As the illustration shows—and the Motor World artist has been successful in making a faithful reproduction—the new cap is a radical departure from the beaten path of automobile headgear construction. Not only is this true of the shape, but of the material as well. The latter was a quiet, grayish looking cloth, restful to the eye—and doubtless to the wearer's head also—after the almost unending succession of prosaic black leather caps, all apparently on the same model. The flaps were turned up and met in the centre of the cap, being held in place by a button of the same color as the cloth.

More than one eye took in the new headgear, and if there is not a change from the omnipresent regulation cap it will be surprising.

Roller Friction Brake.

Roller friction, instead of the usual plain sliding friction, is the chief feature of the Rassinier brake, which was exhibited at the Paris show a few months ago.

As will be seen from the accompanying



illustration, the device is composed of an annular ring A, fixed either to the hub or to the spokes of the rear wheel, a bracket B bolted to the axle and a lever C C, which is fulcrumed on the short shaft E to press the rollers D D against the surfaces of the ring, which turns between them.

The brake is extremely simple; it is claimed that it cannot "fire" and that neither grease nor mud can affect its efficiency. A brake of this type has proved its efficiency on bicycles, for in the recent tests organized by the Touring Club de France it was accorded first prize for brakes acting on the hub.

Angry Action of Abdul Azziz.

Automobiles and Abdul Azziz are out. The Moorish potentate will not only have nothing more to do with the motor vehicle, but has commanded his subjects to abstain from it, and all its works also.

Muley Abdul Azziz, Sultan of Morocco, to give him his full name and title, is angry. This is the story told by James W. Langerman, American Consul at Tangler, while in Chicago last week.

"The Sultan was presented with a French automobile," said Mr. Langerman, "and, after a few trips, declared it the best thing he had ever seen. One day he was out taking a spin and the steering gear became disarranged. His machine got to going and he could not stop it. One of his tires burst, but the Sultan kept on going. Then he hit a big rock. The automobile stopped, but the Sultan went on. He was not seriously injured, but when his chauffeur could not explain to his satisfaction how the accident happened the Sultan grew angry. He sent for his blacksmith and ordered him to break the machine up. Then he issued a decree prohibiting any of his subjects from using the machines. He has long had the idea that the French longed for his country, and is firm in his belief that the French had schemed to bring about his death by means of one of their automobiles."

Philadelphia Takes a Hand.

Thomas H. Martin, secretary of the Fairmount Park Commission, Philadelphia, last week sent out notices to the owners of automobiles to whom licenses have been granted that they must comply with the rule requiring a number corresponding with that on the license to be placed in a conspicuous place on the machine.

This action was the result of complaints made by park guards of the practice of automobile speeding along the park drives and failure to display the number, thus preventing identification of the offending chaffeurs.

An automobile repair shop of unusual completeness is being fitted up by Alden B. Sampson, Pittsfield, Mass. Some \$8,000 worth of new tools have been ordered, and a specialty will be of repairing automobiles of all kinds. The shop will cater especially to the Lenox trade, a large number of automobiles being owned there.

The Steam Vehicle Co. of America, makers of the Reading vehicles, have a moving on their hands. They are removing to their new office and salesroom, No. 52 West Forty-third street, New York, where they will have much better facilities for the showing of goods.

Eclipse Boilers and Burners.

In offering their Eclipse boiler and burner the Steam Carriage Boller Co., of Oswego, N. Y., who claim to be the oldest as well as the largest concern in the country making boilers, bring some strong arguments to bear in their favor.

The boiler is said to give more heating surface than any other boiler in the market. It is provided with washout plugs and water space, or water leg, in the bottom of the boiler to receive all the scale and deposit that accumulates in the boiler and which can be easily cleaned by means of the plugs. The outside shell is offset a proper depth to admit a firebox the same diameter as the shell, giving more space in the lower crown sheets for tubes, which means more heating surface. The water space between the firebox and shell also adds more heating surface to the boiler. In this boiler an eighteen-inch



ourner can be used with a sixteen inch boiler. The fact that the lower part of the boiler is eighteen inches is not objectionable, and more heat can be added to the same size boiler.

The shell and head are in one piece and seamless; the firebox is the same, the boiler being complete in two pieces, having no seams or rivets in the fire. The firebox is an O. G., offset or flanged out to fit the shell and riveted at the bottom of the boiler. Besides making this boiler, the Steam Carriage Boiler Co. furnish all sizes from fourteen inches to twenty-four inches, and from 4 to 30 horsepower.

The Eclipse burner is one of the most serviceable and reliable on the market. The gas jets are raised above the surface of the burner, making the orifice to give any size flame required, absolutely no heating of the main part of the burner to warp or crack and no giving away around the air vents. Should an accident happen to any of the tubes they could be easily replaced by taking them out and putting in new ones, so the main part of the burner will last longer than any part of the vehicle.

Recent Incorporations.

New York, N. Y.—The Harlem Automobile Co., with \$2,000 capital. Directors—B. C. Barry, F. C. Schussler and W. T. Eames.

Newark, N. J.-The Bush Engine Co., with

\$5,000,000 capital; to manufacture botlers, engines, car wheels, trucks, automobiles, etc. Corporators—E. T. Magoffin, Frank R. Series and Alfred G. Brown.

Passaic, N. J.—Prescott Automobile Co., with \$200,000 capital; to manufacture automobiles, etc. Corporators—Ames L. Prescott, Frank F. Weston, William H. Wells, Harry M. Wells and William Miller.

Buffalo, N. Y.—The Buffalo Automobile Station Co., with \$1,000 capital; to manufacture equipments for electric automobiles and their parts. Directors—William Hamlin, Frank A. Babcock, Frank A. Babcock, jr., and Jacob Amos.

Portland, Me.—Sanitary Road Machine Co. of America, with \$500,000 capital; to make and deal in automobiles, fire engines and street watering machines. The officers are:



C. W. Collyer, Lynn, Mass., president, and J. G. Norton, Boston, Mass., treasurer.

Cedarburg, Wis.—The Cedarburg & Milwaukee Mobile Co., with \$10,000 capital; to operate an automobile 'bus line. The officers are: D. Wittenberg, jr., president; William Roebken, vice-president; J. Fred Wittenberg, secretary, and William F. Freund, treasurer.

Jersey City, N. J.—The Speed & Stop Indicator Mfg. Co., with \$225,000 capital; to manufacture a patent apparatus to record the speed of all character of vehicles. The corporators are P. W. Ryder, G. H. Kugler and Frank Bayerdorfer.

Came in With the Boom.

Transcript of a judgment from Richmond County was entered in this city last week against the Anglo-American Rapid Vehicle Co., which has offices at No. 20 Broad street, at Syracuse, N. Y., and at Philadelphia, in favor of Henry Van Arsdale, who has been the New York City representative, for \$11,063 for alleged breach of contract. The company is a Delaware corporation incorporated on November 2, 1899, with a capital stock of \$75,000, and the headquarters were in Philadelphia.

Where Nationals are Made.

Few factories are better equipped for turning out automobiles of a high class than that of the National Vehicle Co., Indianapolis, Ind., a good idea of which may be obtained from the illustration.

The main building is 350 feet long by 75 feet wide, this being exclusive of the engine, boiler and dynamo rooms, which are separate from it. The entire equipment of the factory, from the office to the engine room, is first class in every particular. The latest designs in accurate machine tools are to be found in the mechanical department, while up-to-date methods are in vogue in painting, finishing and ensembling shop.

The railroad switch, connecting as it does with the Belt Railroad—which in turn gives the company direct connection with every railroad entering Indianapolis—enables the company to load automobiles at their own door and to ship direct to any point in the United States. An increasing demand from foreign countries is reported, quite a respec-



table portion of their mail the past few weeks being from across the sea.

Coils for Four Cylinders.

Necessity, the mother of invention, is responsible for the production of the spark coil now being offered to the trade by the H. H. Franklin Mfg. Co., of Syracuse, N. Y.

In the new four-cylindered gasolene car which this company are manufacturing it was found impossible to obtain a coil that would meet all requirements all the time. After prolonged experiments the coil now offered was perfected, and in it its makers are confident that they have a coil immeasurably superior to any now produced.

For instance, the vibrator works equally well set anywhere, thus eliminating entirely the troublesome necessity of delicate adjustment.

Very rapid action is secured, and, in short, this coil meets every condition, it is claimed. It is further stated to be practically indestructible. Manufacturers, dealers and individuals who are looking for a satisfactory spark coil should be interested.

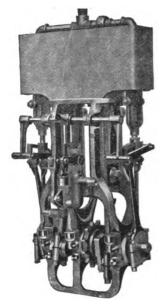
Air and Water Pumps.

THE UNION STEAM PUMP CO., BAT-TLE CREEK, MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.

The Motor World.

Engines for Replacements.

The Acme automobile engines, manufactured by the Rochester Machine Tool Co., of Rochester, N. Y., have been designed especially with a view to replacements on many of the earlier types of steam carriage. This engine has been thoroughly tested, and embodies advantages that are sure to appeal to the discriminating purchaser. The frame is of one piece of solid bronze, the shaft one piece of solid steel, while the bearings, outside centre crank wrist and wrist pin are all provided with phosphor-bronze bushings. The cylinders are of the best grade fine gray iron, the piston rod is of Tobin bronze, which is proof against corrosion, while the crossheads are unusually large, with wide gibs of sufficient length to give full bearing to any point of the stroke. The steam valves are of the plain slide pattern, and the eccentrics-one on each side-are cut from one solid piece. rendering relative displacement



impossible. The engine is of the link motion, Stevenson design. For the guidance of prospective purchasers some of the dimensions and weights are herewith given.

H. P. I	Dia. Stroke.	Wgt.	Hgt.	Width.	Depth.
5	2½ x 3½	85	26	12	7
61/2	3 x 31/2	90	26	12	7
8	3 x 4	140	30	151/2	91/2
10	31/2 x 4	145	30	151/2	91/2
12	4 x 4	150	30	151/2	91/2
20	5 x 7	350	Ĥ	orizonta	

5 to 12 H. P. can be operated either vertical or horizontal.

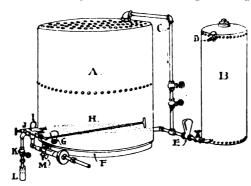
Kerosene for Steam Vehicles.

A kerosene burner for steam vehicles which is said to give excellent results has been produced by F. A. Lyman, of Geneva, Ohio.

"My kerosene generator is nearly identical with the well known gasolene type used on steam vehicles," writes the inventor to the Motor World, "but the means employed in its construction to produce the gas are necessarily very different. The main gas generating is accomplished through a spiral steel

coil located in the heat zone of the main burner. This coil is first heated by a pilot blast flame which is of sufficient power not only to heat the coil, but to raise steam.

"The initial heating or starting of the pilot blast is done by a hand torch, generally known as a painter's torch. The generating



coil is connected with steam of the boiler for cleansing purposes. The coil leads to all the operating valves and also to an outlet valve in the steam regulator; thus it is seen that all working valved parts as well as the main generator may be thoroughly cleansed with steam.

"I also provide an auxiliary heating chamber, controlled by the pilot valve, and a heating torch operating from the spiral generator to heat the initial starting torch, and also an auxiliary oil tank which maintains the fire while the tank is being filled.

"I have applied for letters patent on the construction, which I expect will soon issue."

A, boiler; B, oil tank; C, steam; D, air pipe; E, auxiliary oil tank; F, main burner; G, main burner valve; H, coil generator; I, auxiliary heating; J, pilot light; K, main steam and oil outlet; L, torch heater; M, steam cleaner.

Wheels With Tubular Spokes.

Strength is the watchword of the American Tubular Wheel Co., of Pittsburg, Pa. In support of this the company in their catalogue publish the report of most exhaustive



tests carried on in one of the best equipped laboratories in this country. The report is not only complete, but entertaining, and should be in the hands of every automobile maker.

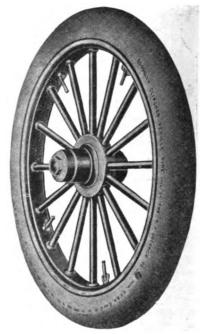
The report gives excellent proof of the strength of construction. The simplicity must commend itself, also the fact that in case of damage to a spoke it may be readily replaced.

A machine turned bolt passes with a neat fit through the rim. This bolt threads into the upper end of the spoke, which is provided with a countersunk washer. This washer is of copper to prevent crystallization. A pin riveted at both ends passes through the bolt and spoke to prevent the bolt from backing off.

The hub is tapped to receive steel studs 2% inches long, which project from the hub 1% inches. The spoke, externally threaded, fits over the stud and is threaded into the hub % inch to a shoulder.

In addition to the matter of strength the points are made for these wheels that they will not shrink, swell or warp, being unaffected by extremes of heat or cold.

Of the two styles here illustrated the smaller is a 30x3\(\frac{1}{2}\), with fourteen \(\frac{1}{2}\)-inch by



10-gauge spokes for vehicles weighing from 1,600 to 3,000 pounds. The larger illustration shows an artillery wheel for heavy vehicles. The size is the same, but there are sixteen 34-inch by 10-gauge spokes.

The hubs are machined from cold rolled steel. The spokes are cold drawn, high carbon steel tubes. Rims are rolled from extra heavy spring steel. Wheels are furnished for any size and make of tire. Hubs are equipped with ball or roller bearings, or bronze bushings, as specified.

Three in Conjunction.

It reported that the Studebaker Bros. Mfg. Co., of South Bend, Ind., has leased the Chockelt Building and will utilize it for the exclusive manufacture of automobiles. H. D. Johnson, superintendent and general manager of the company, will have charge of the industry. An alliance has been formed with the Westinghouse Electrical and Mfg. Co. and the Automobile and Cycle Parts Co. The Westinghouse people will have entire charge of the electrical department.



Century's New Steamer.

At an election of officers of the Century Motor Vehicle Co., of Syracuse, N. Y., R. C. Tillinghast, sales manager of the concern, was elected secretary-treasurer in place of Charles Bridgman, who resigned.

The Century Motor Vehicle Co. are bringing out a surprise in the shape of a new steam car which they expect to enter in the Long Island endurance test, and from which much is expected. The machine is of ample power, and, unlike a good many large sized machines, retains its symmetrical appearance, and is in fact very rakish and attractive. The company are also at work on a

high powered gasolene machine, which is also expected to make its initial appearance in the endurance contest. While the Century Co. still pin their faith, and with good reason, to their splendid steam machine, it is their purpose to market both steam and gasolene this coming season.

Who Wants a set of Tires?

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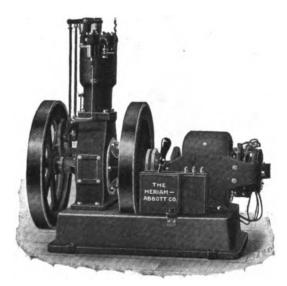
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The Week's Patents.

696,233. Emergency Brake for Horseless Carriages. William D. Goold, Albany, N. Y. Filed Oct. 22, 1901. Serial No. 79,529. (No model.)

Claim.-1. In a brake for a horseless carriage, a foot lever adapted to be operated by the driver of said carriage, an arm attached to the upper end of said lever and provided with ratchet teeth, adapted to catch upon a stationary plate or bar under the floor of said carriage; said stationary plate or bar adapted to be acted upon by said ratchet teeth; an adjustable arm connected with the lower end of said lever; an equalizing bar pivoted at the centre to the end of said adjustable arm; connecting rods connecting the ends of said equalizing bar to bell crank levers at the rear of said carriage; said bell crank levers adapted to operate other con-necting arms; said last named connecting arms connecting said bell crank levers with brake levers over the rear wheels of said carriage; said brake levers supported over the rear wheels of said carriage by arms from the body portion of said carriage, and adapted to press brake shoes upon the tires of the wheels of said carriage; said brake shoes attached to said brake levers and adapted to act upon the tires of said wheels. all substantially as described and for the purpose set forth.

606,251. Revolving Cylinder Explosive Engine. James D. McFarland, jr., San Francisco, Cal., assignor of one-half to John Bruckman, San Francisco, Cal. Filed Apr. 13, 1901. Serial No. 55,643. (No model.)

Claim.—1. The combination of a wheel, a shaft upon which it is revoluble, a second shaft eccentric thereto, cylinders supported approximately radial within the wheel and each having a port for the inlet and exhaust of the propelling medium, pistons movable within the cylinders and connected to the wheel whereby the pistons are reciprocated within the cylinders by the revolution of the wheel, inlet passages through one of said shafts, a valve turnable upon this shaft and having ports to register with those of the cylinders, said ports being so disposed as to admit and exhaust the propelling medium and mechanism by which the valves and cylinders are independently turnable.

606,288. Frame for Vehicles. Paul H. White, Indianapolis, Ind., assignor to the White Steam Wagon Company, Indianapolis. Ind., a corporation of Indiana. Filed May 2, 1901. Serial No. 58,521. (No model.)

Claim.—1. The combination, in a vehicle, of the frame (1) having the rigid downwardly extending bearing members (2) at its front end arranged centrally in the direction of its width, a bolster frame (3) connected to said rigid bearing members, two pivots (4), one at the back and the other at the front of the bolster frame forming the connection, side springs (5) supporting said bolster frame at the ends, and the axle (7) to which said springs are secured at the middle, said several parts being arranged and operating substantially as shown and described.

696,297. Electric Igniting Device for Explosion Engines. Vincent G. Apple, Dayton, Ohio, assignor to Dayton Electrical Manufacturing Company, a corporation of Ohio. Filed July 25, 1900. Serial No. 24,760. (No model.)

Claim.—1. A means for making and maintaining an electric spark for igniting devices within the cylinder of a gas engine, which consists of a dynamo, a circuit opening device within said cylinder, a circuit connect-

ing said device to said dynamo, a means for driving said dynamo by said engine, and a centrifugal device associated with said dynamo, adapted to increase the electromotive force simultaneously with the separation of the terminals of said sparking device, substantially as and for the purpose set forth.

696,391. Tire Construction. John C. Cole. Chicopee Falls, Mass., assignor of one-half to Fisk Rubber Company, Chicopee Falls. Mass. Filed Sept. 23, 1901. Serial No. 76,220. (No model.)

Claim.—1. In combination with the felly of a wheel, a tire, a flat base thereon adapted to fit the periphery of the felly, a downwardly bevelled flange on each side of the base, a loose ring located on each flange, and devices for moving said rings one toward the other against said bevelled surface, and means of engagement between said devices and the felly, substantially as described.

696,397. Frame for Self-propelled Vehicles. Augustus A. Ball, jr., Lynn, Mass., assignor to Elihu Thomson, Swampscott, Mass. Filed Dec. 11, 1901. Serial No. 85,468. (No model.)

Claim.—1. In a vehicle, the combination of a front and a rear axle, a body, a frame rigidly secured to one axle and pivotally secured to the other, and a second frame rigidly secured to one axle and pivotally secured to the body.

696,454. Electrically Operated Plow. Martin T. A. Kubierschky, Berlin, Germany. Filed Oct. 17, 1901. Serial No. 78,931. (No model.)

Claim.—1. A plow having a propelling motor, two sets of shares and means for raising and lowering each set by means of the plow motor.

2. A plow having an electric propelling motor, two sets of shares, separate mechanism for raising and lowering each set, and means for connecting either mechanism with said motor.

696,477. Automobile. Edward J. Pennington, London. England, assignor of one-half to J. W. Plank and George Edward Mills. Carlisle, Pa. Filed June 22, 1901. Serial No. 65,721. (No model.)

Claim.—1. In an automobile, the combination of driving wheels, a swivelled fork union for each driving wheel, motor cylinders forming parts of the fork and connected with said union, a crank shaft having bearings in closures of said cylinders, said shaft having cranks angularly arranged, a piston rod and a cross head for each cylinder, and connections between the cross heads and the cranks, substantially as set forth.

696,478. Condenser for Automobile. Edward J. Pennington, London, England, assignor of one-half to J. W. Plank and George Edward Mills, Carlisle. Pa. Filed June 22, 1901. Serial No. 65,723. (No model.)

Claim.—1. In a device for effecting the condensation of exhaust steam on steam road vehicles, the combination with the steam exhaust pipe of a wheel, which is one of the running wheels of the vehicle, said wheels having a chambered hub to receive the exhaust, and radially arranged distributing pipes leading from the chambered hub, said pipes being provided with discharge openings near the rim, substantially as set forth.

696,489. Separator for Battery Plates. James K. Pumpelly, Chicago, Ill., assignor to Western Storage Battery Co., Indianapollis, Ind., a Corporation of Indiana. Filed April 8, 1901. Serial No. 54,832. (No model.) Claim.—A separator for electric accumu-

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696,518. Gas or Oil Engine. Ellhu Thomson, Swampscott, Mass. Filed June 10, 1899. Serial No. 720,010. (No model.)

Claim.—1. In an oil or gas engine, the combination of two cylinder spaces connected by a narrowed passage and traversed each by a piston connected to the main crank by suitable crank arms and connecting mechanism; exhaust ports opening from one of the cylinders, which may be called the main cylinder, and said ports uncovered or opened for expulsion of exhaust at or about the completion of the outward stroke of the piston within said cylinder; two ports or sets of openings in the second cylinder, one of which is for the passage of air under slight compression for scavenging or washing out the exhaust charge, and the other of which when opened after the exhaust ports are closed introduces a fuel charge under compression, substantially as described.

696,585. Vehicle Tire. William H. Ostrander, Poughkeepsie, N. Y., assignor of one-third to William Tyler Smith, Poughkeepsie, N. Y. Filed Oct. 7, 1901. Serial No. 77,897. (No model.)

Claim.—1. A vehicle tire comprising an elastic tube having a plurality of pockets, and an inelastic body in each pocket, each of said bodies having a diameter sufficiently less than that of its pocket to permit of par-tial collapse of the pocket and subsequent compression of the body between the opposite walls thereof.

696,596. Motor Vehicle. Walter W. Rob-Inson, Chicago, Ill. Filed April 26, 1899. Serial No. 714,528. (No model.)

Claim.-1. The combination, with a shaft 13, of a tube 17 surrounding the same, hangers or supports 15, 16, for said tube, caps 18, 20, provided upon said tube, the former having a screw adjustment thereon with respect to the latter, which is fixedly mounted upon the tube, and roller or ball bearings interposed between said caps and the shaft, adapted to be adjusted by rotating the cap 18, substantially as described.



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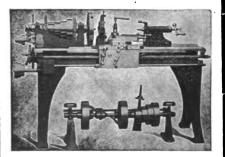
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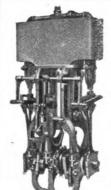
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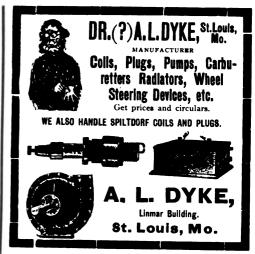
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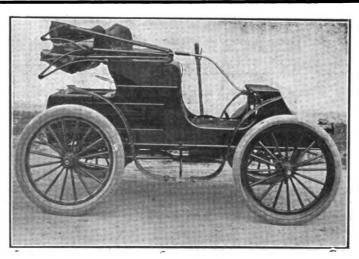
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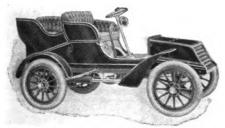
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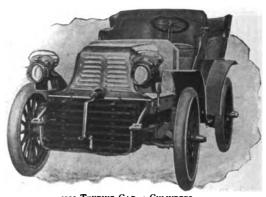
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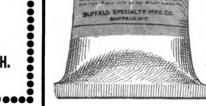
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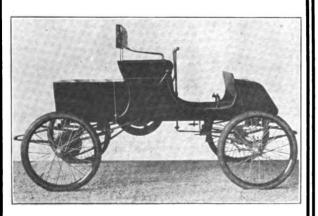
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The New York "Herald" December 22, 1901, by cable from Paris, says Gabriel on a "Darracq" Car broke the record for light car for a flying kilometer and mile in 39 '-5 seconds and 1 minute 3 seconds, respectively, and a standing mile in 1 minute 13 seconds.

Awarded Gold Medal at Automobile Show, London, February, 1902, for Best Car of high powered light class. Also won the French Economy Tests in same class, February, 1902, with a record for 6 1-2 liters for 100 kilometers, approximately FORTY-FIVE MILES run on one gallon.

AMERICAN DARRACQ AUTOMOBILE COMPANY

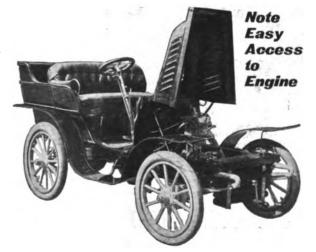
CHAS. D. COOKE, Secretary-Treasurer and General Manager.

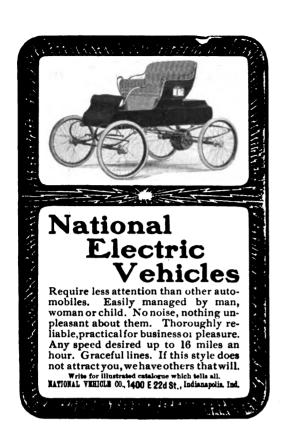
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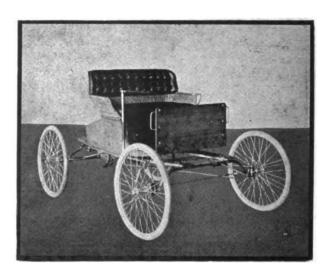
AGENTS WANTED





THE BUCKMOBILE

NO REACHES TO BREAK



BUCKBOARDS are known everywhere for strength and ease of riding. :: :: :: Weight 500 lbs. with eight horse power.

Utica Automobile Co., Utica, N. Y.

"Time is Money"

Save both by adopting



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In which each week appears a record of all that is best, brightest and newest in the world of mechanical traffic.

The VICTOR STEAM PUMPS!

Weight 41/2 pounds; space required in carriage 9 inches in length x 3 inches in diameter.

AIR PUMP.

Capacity 80 pounds pressure on fuel tanks or tires in one minute, with a boiler pressure of 125 to 150 pounds.

WATER PUMP.

Capacity 3 gallons per minute against 200 pounds boiler pressure.

PRICE, \$30.00 each.

These pumps have been adopted by the Locomobile Company, the Mobile Company and other leading manufacturers of steam carriages.

The VICTOR GRADE-METER.



The grade is shown by the location of a bronze ball running in a graduated concave tube filled with spirits.

PRICE, \$1.25 Postpaid.

Overman Automobile Co.,

7 East 42d Street,

NEW YORK.

Department,

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NEW YORK BRANCH. 91 Fifth Ave. PROVIDENCE BRANCH, 15 Snow St.

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WILL NOT 8HRINK, 8WELL OR WARP.

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A FULL FLEDGED MOTOR CAR AT A RUNABOUT PRICE.

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Equipped with 6 B. H. P. Medium Speed

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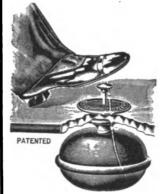
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Philadelphia Store, 51 North 7th St.

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BEVIN BELL

to be distinctly better than anything else of the sort on the market, It will afford us pleasure to foward you details and price on request,

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NEW ELMORE

A Fifteen Hundred Dollar Auto

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EASY TO CONTROL AT ANY SPEED.

THREE POSITIVE SPEEDS FORWARD AND REVERSE.

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ELMORE MANUFACTURING CO., Clyde, O., U.S.A.

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You Want PROMPT Delivery.

You also want a carriage that is

Durable, Reliable, Up-to-date and Built for Service.

Consequently you want a

"CONRAD" Steam Carriage

Send for Catalogue.
DESIRABLE AGENTS WANTED

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THE Apple⊿ Ianiters



have proven so successful that a number of manufacturers of would-be igniters have honored us by copying our names, brought suit for infringement, and in a number of ways showed their jealousy of our superior outhits. Do not confound the Apple Type "E" with any other machine made and do not be afraid of any suit for infringement for we will protect you, and if you want it to call anybody's bluff we will send you a written guarantee that we do not make a machine after anybody's patents or ideas but our own. Just examine our machine and see if you can find any patents on any machines that ours are not superior to.

THE DAYTON ELECTRICAL MFG. CO.,
388 South St. Clair Street, DAYTON, OHIO.

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why you shouldn't equip your machine with the BEST.

FISK TIRES

will solve the problem — they ARE the BEST.

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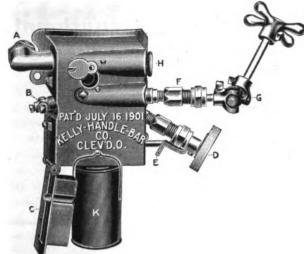
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THAN THE

New Kelly Generator

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ONE-PIECE CAST BURNER

ARE YET TO BE FOUND.

The Generator for Steam Vehicles is enclosed in an aluminum case, with all connections on the outside. It is strong, simple, quick and powerful.

IT DOES AWAY WITH THE DRIP CUP AND LIGHTS WITHOUT FLASHING OR FLARING.

The main fire valve is controlled from the seat. It is small in size, neat in design and adapted for any make of steam vehicle.

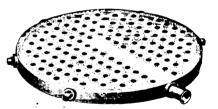
THE ONE-PIECE CAST BURNER IS DESCRIBED BY ITS NAME.

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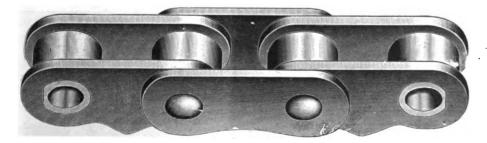
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STRONG AND POWERFUL.



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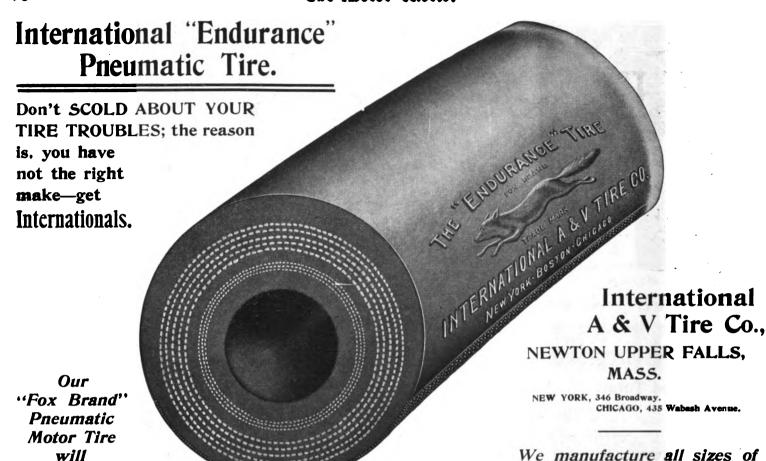
Many of the Leading Automobile "WHITNEY" CHAIN
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IT MAY PAY YOU TO INVESTIGATE.

THE WHITNEY MANUFACTURING COMPANY, - - Hartford, Conn.

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THE MOST EFFICIENT OF ALL ELECTRIC VEHICLES

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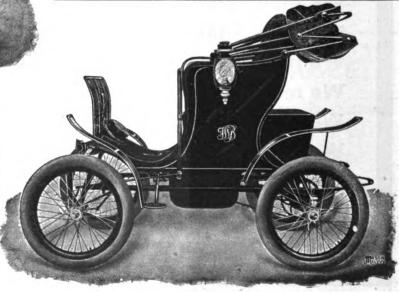
THE LIGHTEST, STRONGEST AND MOST DURABLE OF ALL MOTOR VEHICLES. :: :: :: ::

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STANHOPE.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, April 24, 1902.

No. 4

PROCURED PERMISSION

And One Mile Trials Will Take Place on Staten Island Next Month.

After months of waiting, permission has been granted to run the one mile trials of the Automobile Club of America in Greater New York.

This result was not altogether unexpected, so long and carefully has the Contest Committee of the club been working; but there was always the possibility of a slip-up, and now that the matter is finally settled there is much rejoicing.

On Tuesday afternoon the Board of Aldermen, without a dissenting vote, suspended the automobile speed limitations on the new South Side Boulevard on Staten Island for May 31 for the express purpose of permitting these trials to be run.

The trials have really been on the tapis since last autumn. They were originally intended to be made in connection with the automobile events at the Pan-American Exposition at Buffalo. When that became impossible an earnest effort was made to hold them in this vicinity, but it was impossible to obtain permission from the authorities to run them over a sultable road.

When the 100-mile non-stop run of the Automobile Club of America was announced for May 30 the one mile trials were set for the day following. The interval has been employed in finding a road that was entirely suitable and in shaping matters for making formal application for the necessary permission. Various roads were inspected, but the South Side Boulevard was finally decided upon. There is a stretch of nearly three miles available, extending from Dongan Hill to New Dorp.

The rules for the contest are in type, and now that permission has been granted the details of the course will be added and the pamphlet given out.

July 4 is the date selected by the Springfield Automobile Club for its meet postponed from May 30.

Thieves and a Fire.

There was plenty of excitement at the Automobile Exchange and Storage Co.'s place, 133-137 West 38th street, this city, on Monday last—more excitement than damage, in fact. It was all caused by a fire which broke out, causing a loss of about \$2,000, and being subdued without very much trouble.

The place was filled with automobiles, many of them very valuable ones. These were run into the street in short order, until 38th street looked as if there was going to be an endurance contest. These were in the way of the firemen, and interfered somewhat with their work of putting out the fire. In the excitement a number of robes, lamps, etc., were stolen by nimble thieves who saw their opportunity, and now the work of figuring out just what was taken is being done.

No Change at Present.

It has been reported during the week that there was a strong probability that the Automobile Co. of America would shortly pass into the hands of its stockholders again. In a conversation with an officer of the company on Tuesday the Motor World representative learned that no such step was contemplated at this time. As is well known, matters have been progressing very satisfactorily since Mr. Cryder took charge, and the step referred to will ultimately be taken. So far, however, it has not passed beyond the talking stage, and is not likely to do so for some little time.

Will go to Jamaica.

The start of the called run of the Automobile Club of America on Saturday of this week will be made at 8 o'clock a.m., in order to reach Jamaica in time to witness the start of the endurance contest at 10 a.m. The route will be by way of the Thirty-fourth street ferry to Long Island City and the Hoffman Boulevard to Jamaica. The run will be paced to Jamaica.

The Garden City Hotel, Garden City, will be the rendezvous for luncheon, at 2 p. m.

Work on the new Eldridge gasolene automobile which the National Sewing Machine Co., Belvedere, Ill., are building is progressing satisfactorily and the first vehicle is almost ready to assemble.

READY TO RUN

Arrangements Completed for Long Island Event —Entry List Reaches Eighty.

Nothing but bad weather can prevent the 100 mile endurance run of the Long Island Automobile Club, which takes place on Saturday, from being an unqualified success. The start will be made from Pettitt's Hotel, Jamaica, at 10 o'clock sharp, rain or shine.

Chairman A. R. Pardington and his associates in charge of the event have worked hard, and have succeeded in bringing the preliminary arrangements to a state of perfection that it would be difficult to exceed. Every detail has been looked after carefully, everything that could be done in advance attended to. The controls have been established, together with the supply stations, the remainder of the signs go up to-day, and the arrangements for observers have been completed.

The number of entries has been steadily increasing. On Monday night the number was 66, and during Tuesday and Wednesday additional ones were received sufficient to bring the number to 79, with one belated promised one still to come in

These 79 entries are divided as follows: Electric, 1; steam, 22; gasolene, 56. The majority have been entered by or on behalf of the manufacturers, although a good proportion of private entries was also received. One commercial vehicle, a delivery wagon, entered by the Long Island Motor Co., is the sole representative of this class of automobile.

The problem of providing official observers for this large number of vehicles has received great care. Formal applications were received from 51 persons, mostly newspaper men, for the posts. To these will be added a sprinkling of Long Island and other club men, and the remainder will come from students at Columbia University and the Brooklyn Polytechnic Institute. A copy of the rules governing the contest will be given them, and each vehicle will be supplied with

a map of the course, varnished to protect it in case of rain.

All turns, controls and supply stations will be plainly marked. Stretches of the road where the maximum speed allowed is but eight miles an hour will also be indicated.

Chairman Pardington said to the Motor World man on Wednesday night that the course was in excellent condition throughout its length. He added, however, that a good, hard rain between then and Saturday would lay the dust and pack it hard and smooth. The last of the signs will not be put up until to-day, the depredations of the small boy being feared.

Fourteen controls, or checking stationsthe first at Flushing and the fourteenth at Springfield-have been provided, together with four supply stations for the steam vehicles. These are located at Roslyn, Hicksville, Hempstead and Queens.

The three White steam vehicles enter the contest on the same footing as the gasolene cars. That is, they will compete for the ribbons awarded to the vehicles going through without a stop. The entries were made with this proviso, and we accepted, with the promise that they would be treated on the same footing as the non-stop vehicles.

A cup has been offered to the vehicle which, irrespective of its class or other conditions, makes the fastest time up Roslyn Hill. The donor is C. J. Field, and the gift has been accepted by the Long Island Automobile Club.

The officials for the day are as follows: Referee, Winthrop E. Scarritt; judges of gasolene vehicles, M. C. Krarup, W. J. Stewart and L. A. Hopkins; judges of steam vehicles, H. Ward Leonard, H. L. Towle and L. R. Adams; judges of electric vehicles, M. W. Ford, J. A. Kingman and J. Adolph Mollenhauer; judges of gasolene consumption test, A. R. Shattuck, W. Wallace Grant and W. P. Stephens; judges of hill climbing test, F. B. Stephenson, G. G. Stephenson, jr., Nathaniel Robinson and H. R. Perkins; timer, J. E. Savell; clerk of course, Frank G. Webb, Below is the list of vehicles entered:

CLASS A.

Steam vehicles-All powers and weights

Steam venicles—An powers and v	veignts.	•
	Passe	
Entered by. Make. H.P.	Wgt. g	
H. M. Wells, Prescott 4½	1100	2
W. H. Wells, Prescott 4½	1100	2
International M. C. Co., Toledo 71/2	1400	2
A. G. Southworth, Toledo $7\frac{1}{2}$	1400	2
H. B. Weaver, Toledo $7\frac{1}{2}$	1400	2
Overman Auto. Co., Victor14	3000	4
Lane M. V. Co., Lane 4	925	2
Lawrence Abraham, Locomo-		
bile 4½	900	2
Lane M. V. Co., Lane 9	1350	4
White S. M. Co., White 6	1350	2
White S. M. Co., White 6	1350	2
White S. M. Co., White 6	1350	2
Foster A. M. Co., Foster 6	1400	2
Century M. V. Co., Century 8	2000	2
Edwin Melvin, Prescott 41/2	1100	2
W. J. Stewart, Locomobile		
Henry Lohman, Locomobile 6	1200	2
Locomobile Co., Locomobile 31/2	950	2
Locomobile Co., Locomobile 31/2	950	2
B. L. Wright, Grout 4	900	2
Steam V. Co., Reading 5%	1160	2
W. P. Kennedy, Serpollet	• • • •	•

CLASS B.

Electric vehicles-All powers and weights. Wgt. gers Make. H.P. Co., Waverly. 2 Entered by Internat l M. C. CLASS C.

Gasolene vehicles-Under 1000 pounds.

		Passe	
Entered by. Make.	H.P.	Wgt. g	ers
P. P. Pierce, Pierce	31/2	700	2
Torbensen Gear Co., gasolene.	5	700	2
C. C. Singer, Oldsmobile	4	700	2
A. H. Funke, Kellecom	5	820	2
Olds Motor Works, Oldsmobile	4	800	2
Olds Motor Works, Oldsmobile	4	800	2
CLASS D.			

Gasolene vehicles—Between 1000 and 2000 pounds. Passen-Wgt. gers

1010 2

3500 6

2400

2100

2500

2900

3

2

Entered by. Make. Ward-Leonard Electric Co.,

Knickerbocker, gasolene... 5 Ward-Leonard Electric Co.,

Ward-Leonard Electric Co.,		
Knickerbocker, gasolene 5	1010	2
Ward-Leonard Electric Co.,	1010	-
	1010	a
Knickerbocker, gasolene 5	1010	2
Ward-Leonard Electric Co.,		
Knickerbocker, gasolene 5	1010	2
C. J. Field, Darracq16	1700	2
C. J. Field, Darracq 9	1300	$\bar{2}$
	1000	_
George M. Brown, Haynes-	44.50	
Apperson 9 Peerless Mfg. Co., Peerless 16	1950	2
Peerless Mfg. Co., Peerless16	1600	2
J. Insley Blair, Panhard16	2000	4
Knox Auto. Co., Knox 6	1300	2
Henry C. Cryder, Gasmobile 9	2000	$\bar{2}$
Transath & Chinaga Da Dien	2000	_
Kenneth A. Skinner, De Dion-	1070	2
Bouton 8	1250	
Banker Brothers, Peerless16	1700	2
Adams-McMurtry Co., Pack-	•	
ard12	1995	2
Adams-McMurtry Co., Pack-		
ard12	1997	2
8F0		$\frac{2}{2}$
F. G. Youngs, Peerless16	1700	Z
G. H. Leavitt, Autocar 8	1200	2
G. W. C. Drexel, Autocar 8	1200	2
Patterson & Shaw, Elmore 5	1000	2
H. S. Chapin, Haynes-Apperson 9	2000	2
	1950	$\tilde{2}$
Michael Piel, Haynes-Apperson 9		
H. S. Chapin, Haynes-Apperson 6	1250	2
W. J. Stewart, Autocar 8	1000	2
U. S. Long Distance A. Co.,		
Long Distance 7	1200	2
Lawrence Mott, Darracq 9		4
Amer. Darracq Co., Darracq 9	1250	$\hat{2}$
Danier Omen Winter 15	2000	4
Percy Owen, Winton15 Percy Owen, Winton8		
Percy Owen, Winton 8	2000	2
Central Auto. Co., Peugeot11	1920	2
F. E. Lewis, 2d, Long Distance 7	1200	2
Haynes-Apperson Co., Haynes-		
Apperson 9	1900	2
R. A. Greene, Fournier-		_
	1800	2
Searchmont12	1900	2
E. P. Gallaher, Fournier-	4000	_
Searchmont12	1800	2
E. B. Gallaher, Fournier-		
Searchmont 8	1700	2
A. J. Lamme, U. S. Long Dis-		
tance 7	1000	2
tance	1000	_
I. W. England, U. S. Long Dis-	1000	
tance 7	1200	2
CLASS E.		
Gasolene vehicles—Over 2000 pe	ounds.	
Canonicae venicios o con 2400 p	Pass	en-
Entered by. Make. H.P.	Wgt. g	ers
H. S. Woodworth, Panhard24	3000	4
H. S. Woodworth, Panhard24 M. F. Foster, Gasmobile 7	2210	2
Sidney Dillon Ripley, Gasmo-		
bile20	2700	4
E. E. Britton, Panhard16	2600	4
E. E. Drillon, Fannaru10	2200	4
Dr. J. G. Lyman, Panhard12	2200	4
Charles Rockliff, L. I. Motor	2500	e

Wheel-Within-Wheel Co., Gas-

Alex. Fischer, Rochet-Schnei-

B. M. Young, Friedman.....

W. S. Kilmer, Panhard-Levas-

mobile

MARVELLOUS SPEEDING

Money Kings of two Continents bid Defiance to Non-Racing Edict.

All previous automobiling flights are cast in the shade by a performance of W. K. Vanderbilt, jr., near Paris on Sunday lastif the cabled accounts are correct and can be corroborated. He is alleged to have ridden a distance of 18 miles 35 yards in 16 minutes. Incidentally he covered a kilometre, .62 of a mile, in 28 seconds.

All this was done during a little practice spin which the young millionaire took for the purpose of getting his hand in preparatory to his race with Baron Henri Rothschild. The latter, however, has not been idle, for he has been flying over the roads at the rate of "seventy miles an hour or more." As the race is nearly a month off. and the contestants expect to do much better than these performances, the ultimate result may be anticipated. It cannot well be less than the annihilation of all locomotive records, the only ones left to conquer.

The Vanderbilt performance was made over the Ablis-Chartres road, thirty miles out of Paris, which is described as being "admirably adapted to delight automobolists. being practically flat and in capital condition for speeding."

"Over this road, in his Mercedes-Daimler machine, Mr. Vanderbilt went spinning in his characteristic fashion, cool and confident, 'taking all chances' that came in his way, his very coolness seeming to give extra speed.

"He did a kilometre (1.098 yards) in 33 secends, within 31-5 seconds of Serpollet's sensational record, made recently at Nice, and beating the record of 35 4-5 seconds, which stood previously to the Nice performance.

"This was not a mere 'flash in the pan,' as it were, for Mr. Vanderbilt went on and did a kilometre on a slight decline in 28 seconds and six kilometres (3.72 miles) in 3m. 14s., or at an average of 32 1-3 seconds.

"He completed twenty-nine kilometres (18 miles 35 yards) in 16 minutes, an average of 33 1-10 seconds, which breaks all previous records for the distance."

There is, strange to say, not a word said about the timing of the ride, nor how the distances were so accurately gauged. Nor is it told why the French officials, who are so earnestly opposed to automobile racing just now, did not interfere. It is only fair to suppose that the "records" will go into history as unofficial ones. Nevertheless, it is a pity that such tremendous speeds, if they were made, should be allowed to go for nothing.

The entire eighteen miles was done at an average rate of 53.3 seconds to the milemuch the fastest time ever made for such a distance on an automobile.

DEASONS FOR RECRUITS

Why They Should Join the American Automobile Association—Scarritt's Letter.

The work of recruiting has been begun by the American Automobile Association. Last week President W. E. Scarritt sent out a circular letter to all automobile clubs in the United States which have not already joined the association. The letter was as follows:

"We are sending you a copy of the constitution and bylaws adopted by the American Automobile Association in convention assembled in Chicago on March 3.

"We hereby extend to you a cordial invitation to bec me a member of the American Automobile Association. In order to bring before you clearly the general purposes of our organization you will allow me to mention them briefly, as follows:

"First—The securing of rational legislation.
"Second—The formation of proper rules governing the use of the automobile.

"Third—To protect the interests of automobilists against unjust discrimination.

"Fourth—To maintain their lawful rights and privileges.

"Fifth—To encourage the use of the automobile and its development.

"Sixth-To promote the good roads movement,

"The individual clubs are doing good work in their local field. It has been thought that the time has c me when individual clubs scattered throughout the country should have an opportunity to unite in a national organization.

"At present the automobilist is a pioneer. The lot of the pioneer in any field of endeavor is not an easy one. Old laws and customs have to be readjusted to the new order of things. I believe that the purposes of the A. A. A. as set forth above will appeal to you. We need your co-operation and assistance, and trust that we may meet with an early response to this invitation.

"In order to carry out the objects of the association a considerable amount of money will be needed, and fees have been placed as low as is consistent with the amount of funds that must be secured to effectually accomplish good work.

"Trusting that we may have an early favorable response to this invitation, which we make as hearty and cordial as possible, we remain."

At the present time the association has eight members, viz.: Chicago Automobile Club, Chicago, Iil.; Long Island Automobile Club, Brooklyn, New York; Automobile Club of America, New York; Automobile Club of Philadelphia, Philadelphia, Penn.; Rhode Island Automobile Club, Providence, R. I.; Automobile Club of New Jersey, Newark, N. J.; Automobile Club of Utica, Utica, N. Y.; Grand Rapids Automobile Club, Grand Rapids, Mich.

Illness not Serious.

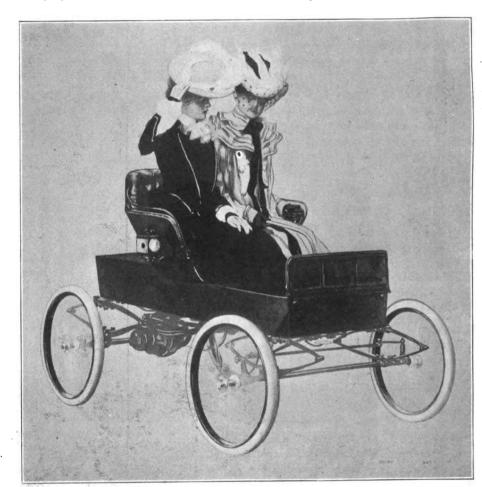
Reports of the illness of Albert C. Bostwick, the well known automobile enthusiast and member of the Automobile Club of America, have been in circulation. It was said that he was in a hospital, lying almost at the point of death owing to an operation rendered necessary by the presence of a tumor in his brain.

Investigation developes the fact that the reports are very much exaggerated. He has been at a private hospital in this city undergoing an operation on his nose. The operation is described as a minor one, rendered necessary by the fact that Mr. Bostwick had

Striking Waverley Poster.

That automobilists are frequently anything but sightly will be freely attested by a majority of observers. But there is a reverse side to everything, and automobiling is no exception. No one can look upon the Waverley girls herewith depicted without admitting that they would stand a good chance of carrying off the prize in any competition in which they entered. Henry Hutt has undoubtedly caught the spirit of the automobile girl, and produced a picture that will attract wide attention.

In the original, a large wash drawing, handsomely mounted on cardboard, the ef-



THE WAVERLEY GIRLS.

been suffering from a mild attack of catarrh. Since it took place he has ben out and about, visiting the Automobile Club and indulging in an automobile ride.

Dixon Business is Prosperous.

At the annual meeting of the stockholders of the Joseph Dixon Crucible Co., held in Jersey City on Monday, it was reported that the entire bonded debt of the company had been wiped out, and it was decided to erect two buildings, to cost \$25,000, to meet the increase in business. The following directors were elected: Edward F. C. Young, John A. Walker, George T. Smith, George E. Long, William Murray, Joseph D. Bedle and Edward L. Young. George T. Smith succeeds Daniel T. Hoag, deceased.

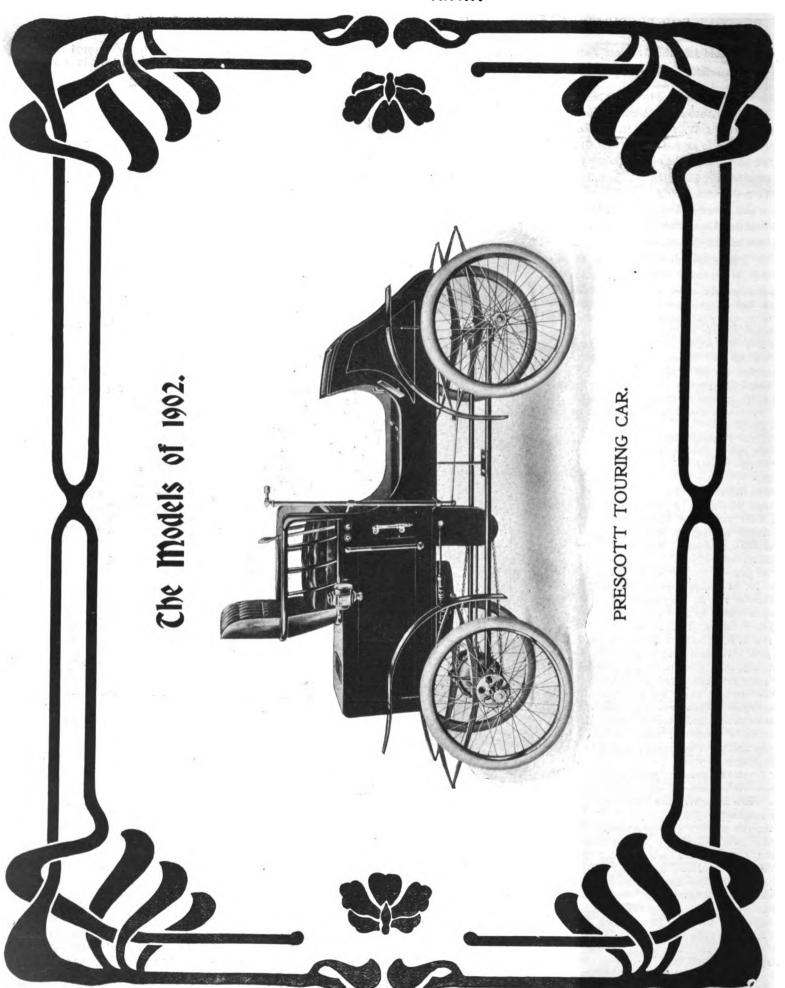
fect is very striking. The International Motor Car Co. is to be congratulated on the work of its artist.

A third suit has been brought by the Whitney Motor Wagon Co. of Boston, this time against the Milwaukee Automobile Co., of Milwaukee, Wis. The grounds of complaint are the same as were alleged against the White Sewing Machine Co. and Stanley Bros., and involve most of the important patents standing on steam vehicles.

Third Whitney Suit.

At the plant of the Electric Vehicle Co., Hartford, Conn., there are now 500 men employed on full time, and the works present a very busy appearance. Supments are being made daily to all parts of the world.

Minneapolis, Minn., dealers are reporting large sales, and complain that they cannot obtain vehicles anywhere near fast enough.





Published Every Thursday
By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING.

154 Namau Street,

NEW YORK, N. Y.
TELEPHONE, 2652 JOHN.

Leaden Office, 53 Fleet Street, . . C. W. BROWN.
Farin Office, 2 Rue d'Abbeville, . . R. F. COLLINS.

Subscription, Per Annum [Postage Paid] . \$2.00
Single Copies [Postage Paid] . . . 10 Cents
Foreign Subscription \$3.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE GOODMAN COMPANY.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the teclities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N. Y. Post Office, November, 1900.

NEW YORK, APRIL 24, 1902.

All Eyes on the Endurance Run.

To the man whose sole test as applied to an automobile is summed up in the question, "Will it run one hundred miles without breaking down?" the Endurance Run next Saturday is likely to furnish an affirmative reply.

A year ago, under the most unfavorable circumstances, the number of blue ribbon winners was surprisingly large. If those vehicles which were disqualified because they covered the course too quickly be added to the number, the proportion is remarkably large. The absolute failures were, on the other hand, very few in number.

This year's test has an entry list many times larger than its predecessor. Unfavorable weather might bring the number of starters down materially, but it is equally certain that a sunshiny day would have just the contrary effect. In either event a good showing of successful finishers is assured, and it is merely a question whether the percentage will be as high.

If a marked improvement in automobile

design and construction, coupled with a greater knowledge of what is required in order to emerge from a test of this kind successfully, count for anything, the showing ought to be a remarkable one.

But the best laid plans oft go wrong, and with the strictly drawn and impartially enforced rules of the event under notice there is plenty of room for the knocking out of the calculations made prior to the start.

The interest in the test has been steadily increasing until it has reached a point that is little short of remarkable.

This is evidenced not only by the number of entries received by the committee, but by the talk one hears among automobilists everywhere. Such interest is not confined to this city and its vicinity. Throughout a radius of many hundreds of miles the trade and public is watching the event, and the number of visitors drawn here solely by the contest promises to be large.

Another feature that is even more noticeable is the belief that the run will make it possible to compile valuable data regarding the performance of the present year's vehicles to an extent never before even thought of.

The method of providing observers, these including newspaper men, automobile users and students from technical schools makes to this end.

The performance of each vehicle at every stage of its journey will be carefully recorded. So, too, will the consumption of gasolene. It will be very strange, therefore, if after the run it is not possible to tell just what such vehicles are capable of doing.

Fiction Once, Reality Now.

The time necessary for a Rip Van Winkle sleep is about all that is required to make sober reality of the wildest flights of fiction.

Twenty years ago the prolific pen of a Jules Verne, or the less carefully worked out imaginings of the facile inventor of the Frank Reade creations, made us familiar with self-propelled vehicles which left death and destruction in their path. But we never regarded them as anything but fiction. That they should ever be realized in steel would, if predicted then, have seemed the wildest folly.

But it is a pretty safe prophecy now that the next great war will find the motor vehicle a very important factor.

Both as a means of transportation—and what a lessening of the enormous strain on the commissary department that will meanand of offence the automobile will play its part. There is scarcely a European government of note that has not been conducting exhaustive experiments in this direction, and more than one of them has reached a point where the experimental stage is almost or quite passed.

The derailing of armored trains in the Boer war has taught a lesson that is being heeded. The value of the vehicle which furnishes its own motive power, which needs no carefully guarded and easily destroyed line of rails to enable it to get about, but which, instead, goes wherever there are found roads even of the crudest sort—such a perambulating blockhouse can scarcely be valued at too high a figure.

What the ironclad was in our Civil War, such a land monster as this promises to be in the ones to come. It is small wonder, then, that time and money are being expended lavishly in the effort to evolve something entirely practical in this direction.

Fact vs. Frenzy,

We commend to the notice of the autophobes of the bench, bar, press and the legislative halls the performance of the young man who won the so-called Marathon foot race from Ashland to Boston, Mass., on Saturday last. In the teeth of a wind and plentiful dust swirls he completed the 25 miles of up hill and down dale road in 2 hours 43 minutes and 15 2-5 seconds; and at that no records were broken.

If fact and not frenzy dominated the thoughts, actions and utterances of the autophobes in question the performance would convey its own moral. But as frenzy rules, it is necessary to point out that the young man averaged better than eight miles per hour—the practically impossible speed which the "crusaders" would impose upon self-propelled vehicles of many horsepower.

To require that conveyances shall move slower even than a man can run is apt to impress the thinking man as mightily like turning back the hands of time and placing barriers clear across the road to progress.

How They View It.

A curious study is afforded to observers of the attitude of automobilists toward their fellows. The task is an easy one, for the minds of most of them are like open books, to be read by any one who cares to look.

The gasolene adherant is like the Englishman of a few centuries back—he can brook no equality; while the advocate of steam re-



sembles the Scotchman of the same period he modestly foregoes any claim to superiority, but resents the stigma of inferiority. The two classes unite, however, in looking down on the devotee of electricity.

The gasolene vehicle is the automobile of the present as well as of the future, if the interested one be permitted to tell the tale. There is nothing that is in anywhere near the same class; steam and electricity have their uses, of course, but for general all around use—pshaw, it is absurd to even mention them.

Curiously enough, this attitude is not greatly resented by the steam men. If they take up the challenge at all, it is usually to prove equality, and not to put in a counter claim to being the best. If they can match the arguments or the performance of their rivals they appear to be quite satisfied. It is almost unheard of for them to "cut her loose" and make a bold bid for first honors.

Much of this is due, probably, to the fact that racing has been almost given over to the gasolene type. In a lesser sense the same thing has been done with speeding of all kinds. The big steam vehicles have yet to make their appearance and to score their victories.

That they will do this eventually, instead of, as in the past, leaving to their rivals a clear field, is a foregone conclusion. And when they do start in a race of this kind there is no doubt that they will prove to be formidable competitors.

The possibilities of steam, both as regards power and speed, are too well known to leave any doubt on this point. The road locomotive has heretofore been of the gasolene kind, but there is little or no reason why its performances should not be duplicated with the steam kind.

Nevertheless, the superiority of the gasolene vehicle in these respects really exists and is generally admitted. Out of this fact has come the complacency which marks nearly all gasolene vehicle users.

Also a Warm Weather Desideratum.

Winter is generally regarded as being preeminently the season when protection from the elements is needed by automobile users.

Therefore, what effort is made to provide this protection—and it must be admitted that it is so infinitesimally small as to be an almost negligible quantity—is confined to the months when temperatures are low. No one seems to give a thought to the need of something of the kind when the moreury rises in

the glass, and haste is made to divest oneself of, instead of donning, clothing.

But the sun, the dust and the heat form a combination only slightly less formidable than the snow, the wind and the cold of winter

To be sure there is always a breeze, and that lessens the heat very materially. On the other hand, it makes the dust nuisance many times worse, and does not alleviate in the slightest particular the discomfort of the glaring and blinding sun. The latter shines on all without fear or favor, and the former renders the use of unsightly and uncomfortable goggles absolutely essential.

The disposition to endure these ills with any marked degree of patience is found only where the pastime is of comparative newness. Sconer or later there comes a time when the feeling arises that something more is needed than a vehicle open to all the elements

That time was reached in France—the oldest and most learned of the automobiling peoples—some little time ago.

To that fact was due the appearance of the limousine type of vehicle and the other more or less tentative efforts to afford relief. They were crowned with instant success, of course, and there is little reason to suppose that the habit of using covered vehicles will hereafter be confined to the inclement season.

There is a hint here for makers who desire to look a little further ahead than the end of their noses. One has but to go among automobilists to find that there is a demand latent here that needs only a little stimulating to bear rich fruit.

Time Will Settle It.

It was inevitable that castings should sooner or later receive attention at the hands of those responsible for the design and manufacture of automobiles.

The practice of using castings, even of the highest type, for parts that are subjected to driving or twisting strains and stresses is one that is not very easy to defend. It may be said that automobile weights need not be pared down to the lowest point, and that consequently heavy castings may be used for certain parts with entire safety. Or that the extreme cost of forgings when made in small lots or by hand necessitates the use of castings.

Such arguments as these, however, can only serve as stop gaps.

The motor vehicle of the highest type demands, and will eventually have, the best

possible material. There are places where castings can be used with perfect safety—where, indeed, it would be folly to think of using anything else. But there are also others where the lack of uniformity of the casting, its inferiority in strength and its general uncertainty render its use undesirable.

No one at all familiar with vehicle construction to-day and that of a year or two ago can doubt that a great change for the better has been made already in this respect.

It is remarkable what wonderful things can be done under stress of necessity, or when one's imagination is in good working order. According to a very conservative journal of this city, a bicycle policeman last week chased a flying automobile on Central Park West, and both of them turned a corner while going at the rate of twenty-five miles an hour or much more. The policeman expected to see the automobile smash into the curb, but it did not; nor did he come to grief there, although travelling even faster than the motor vehicle. Further on, however, a little piece of wood got in the officers' way and uncycled him. But the automobile, its speed being increased to about a mile-a minute, continued on its journey.

Just now there seems to be a competition between rich men to see who can give the most money for an automobile. At present the top notch is said to be \$17,000, the amount alleged to have been paid for a high-powered French vehicle by a New York broker who achieved or had thrust upon him unpleasant notoriety a short time ago as the result of a fatal accident. This is said to be \$1,000 better than the previous high water mark.

It is not often that the devastator becomes also a lifesaver, but that is the part played by an automobile last week, if the "yellow" journal telling the story is to be believed. The vehicle, appropriately dubbed the "Dark Demon," struck a Long Island farmer, knocked him 25 feet in the air, caught him on the rebound and hurried with him to a doctor at a hundred miles a minute or thereabouts. The farmer recovered.

Have you seen the "King of the Belgians tonneau type body"? It is found only on the most expensive of foreign automobiles.





There may be a time and a place where the propriety of chasing rainbows is not open to question. When this is and where I leave for some one else to determine. Certain I am, however, that so far as automobiling is concerned the time is not now nor the place Washington. Just about this time the handsome president of the Washington club has his mind and time fully taken up with the miles in which he is most interested, and has, I am afraid, but little inclination to do anything with the five thousand other miles which the rainbow chasers wish the United States Government to cover with a macadamized transcontinental boulevard.

This particular cross-continent boulevard rainbow is nigh on to fifty years of age now. and has been chased by notoriety hunters so long that it really expects a lot of that sort of attention. The wheelmen did their share of chasing in the matter, and then turned the job over to the automobilists. some of whom seem almost foolish enough to take hold of it. I wish they wouldn't. Really, there are so many sensible and possible things to be undertaken for the benefit of automobiling, in which the wasted energy of rainbow chasing might be profitably employed, that I hate to see any of it bartered for a bit of cheap newspaper notoriety, gained by asking Congress or any other legislative body to sanction or to plan a boulevard across the continent.

'The sad, but it is none the less true, that if the would-be owner of an automobile has no dust his name is mud. This may be a dirty way of putting it, but what would you?

. . .

It would be thought selfish, perhaps, if I was to say that personally I look upon a large amount of the automobilists' efforts for good roads as love's labor lost. Ethically I believe this good roads enthusiasm to be an excellent thing; practically-that is, what the rural voter and his ally, the legislator, consider as being "practical"-I don't believe much in it. For the present, until the automobile has come to be regarded as more of a satisfactory, everyday sort of an affair, all the energy of those working for its benefit should be devoted to overcoming the prejudice existing against the vehicle and its use, and to the preventing the enactment of special legislation, or the enforcement of general laws against automobiles only. To do this will keep all hands for some time too busy to allow of any side excursions into the philanthropic region, wherein the rural resident and the petty politician are to be taught the need for good roads.

First let us see that the rights of automobiles are secured and maintained on the roads as the roads now are. When this has been accomplished, then we can joyfully proceed to make the roads what they should be. To do otherwise is to build good roads for the purpose of having automobiles legislated off of them, or if not that, at least so restricted as to make their use of the good roads more of a hardship than a pleasure. To up-to-date an old saw, it would be clearly a case of putting the horse before the car(t).

When a man has so much money that it troubles him he can usually find some maker or agent of an automobile who will relieve him of a large number of his monetary troubles in return for an equal number of mechanical ones.

. . .

Sometimes it is an even thing between the friends and the foes of the automobile when one attempts to tell what it can do and the other replies with what it cannot do. That those ignorant of everything connected with the vehicle should be inclined to believe it has few, if any, real capabilities is but natural, but when those who do know something of it proceed to tell of the impossible things it can do or is going to do, then the cause for surprise is greater. Too many users of an automobile are prone with itas with most other things the broad uses of which they readily grasp, but the details of which they do not understand-to form an altogether exaggerated notion of its capabilities, and to expect far too much of it. More than half of all the troubles which come to the user of a well built vehicle are the direct results of this belief in the ability of the conveyance to do more than any other mechanical affair is expected to do. To see that the water and fuel tanks are filled, and to occasionally lubricate a bearing point or two, is all the care or attention such people think a vehicle should have to run well and constantly. Eventually they either learn differently or else they return to the horse; and he, peor animal! suffers from their ignorance. . . .

An optimist is a man who believes his dreams of a perfect automobile will come true. A pessimist is the same kind of a believer, only his dreams are different.

There is no good excuse for poor printing in this day and age. It is not necessary for a manufacturer or an agent to have his letterheads, billheads and envelopes unusually expensive. It costs the printer no more to set these things in a neat, attractive way than to botch them. It does not require a great many type faces nor ornaments to make them attractive. In fact, I think the fewer of either used the better the general result is liable to be. The trouble with most printers is that they use too great a variety on the work they turn out for the automobile trade.

There is a certain balance and symmetry that can be obtained with two or three plain faces of different sizes which all the fancy type and ornaments in a printing office will not impart, and it is this the automobile maker and the dealer should see to it that he gets. More, perhaps, than any other business of its kind does the automobile trade come in contact with a class of people who. being sticklers for good taste in their own affairs, are rather prone to look for it when they come to deal with others. Many a favorable impression has been made and a sale resulted from a well printed letterhead, and quite as often has a really deserving man or machine been refused consideration solely because the initial impression created by inferior stationery was an adverse one. If you think it over you will see that I've not exaggerated the advisability of making a good impression by the use of good paper, good printing and good ink.

I've noticed that as a rule the I'll-neverscorch resolution of the owner of a high powered vehicle is stronger at its birth than at any subsequent period. Wonder why that is?

Blood will tell! You can't bestow the name of Bishop on a man and put him in control of an automobile without something happening. By cable comes the news that another Bishop, a brother of the D. Wolf one, has been attacked by natives armed with clubs while slowly proceeding through an Italian tunnel. To prove himself worthy of the name he bears and the automobiling repute attached thereto, the cable tells us that Mr. Bishop was only going through that tunnel at the (for him, I suppose) very slow speed of 45 miles an hour! When a man can't crawl through a tunnel at such a snan's pace as this, then things are coming to a pretty pass and it is time for the automobilists of America to hasten to the rescue of one of their number, who, like his persecuted brother, is evidently being made a martyr of by boors whose delight it is to bait, or to beat, a Bishop.

The purchasing of a cheap or an experimentally constructed vehicle always seems to me pretty much like renting a door for the sole purpose of keeping a wolf away from it.

I have seen a few symptoms of the guarantee mania here and there in the trade. I hope these are only sporadic and not the forerunners of an epidemic in that direction. There is no earthly, and certainly no unearthly, reason why the buyer of an automobile should expect a guarantee of its perfection and reliability. Neither is there any reason why, if even the buyer did expect something of this kind, that he should not be disappointed. In the automobile manufacturer's anxiety to sell the vehicles he makes he may in an evil hour be tempted to equip them with guarantees. When he does, however, he can bid a long farewell to the profits of his business.

THE COMMENTATOR.



DESIGNED TO DESTROY

Details of the Simms war car—Useful Along the Coast to Stop Landings.

It appears that the Simms motor war car, which was briefly described last week in cable dispatches, is really a long step forward in the direction of evolving a practical war vehcle. It was given a trial at the Crystal Palace and made a very favorable impression

The visible portion of the vehicle bears a strong resemblance to the hull of a vessel inverted. It is practically unscalable, and a ladder for ascending or descending is provided. It was designed and built to the order of Vickers, Son & Maxim, Limited, for coast and road defence, after a number of separate designs had been made for the purpose.

It is considered that such war cars as these would prove particularly useful for defence against landings in that country, as there are few points on the coast which are far removed from good, or sufficiently good, roads, upon which the car could move with celerity to beat back the foe. It would also prove of great use in keeping open lines of communication, for hauling guns into position or for searchlight operations. In the case of street riots the appearance of this moving fort, furnished with arms capable of mowing down men by the hundred, would undoubtedly have a good effect.

The rectangular frame is constructed of heavy U section steel channel, and special attention has been given to the combination of the greatest strength with the minimum of weight. The frame is constructed to support a maximum load of twelve tons, while the tare will never exceed six tons. The frame runs 17 feet by 6 feet 2 inches over all,

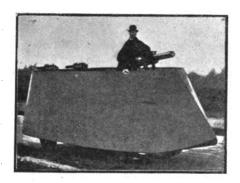
The motor-a sixteen horsepower four cylindered Daimler type of engine-fitted with Simms-Bosch magneto ignition and timing gear, and the speed gear, are carried on a special frame, mounted longitudinally on the car frame. This special frame is formed of Mannesman steel tubes, and strongly attached to the main frame by brackets and stays. The cylinders are each of 90 mm. bore, and the engine has a stroke of 130 mm., is governed by a centrifugal governor taking effect on the exhaust valves, and has compression of 60 pounds per square inch. As in the Milnes oil war truck, which ran in the War Office trials at Aldershot, the engine will run with either gasolene or heavy oil. The cooling of the engine is obtained by means of what is now well known as the Cannstatt cooler, with inducing fan rotated by gear off the engine shaft. The engine and gear are set low down in the centre of the car, which is decked nearly all over some 2 feet 6 inches below the top edge of the armor skirt.

The change speed gear, which is of the usual Cannstatt type, affords four definite

speeds, viz.. one and a half, three, five and nine miles per hour with the engine running at 750 revolutions per minute. With the exception that there is one lever to each pair of speeds, and a reversing lever, the war car is driven and steered by wheel and worm steering, just as an ordinary road car, and with similar ease. The transmission of the drive from the gear is by countershaft and chains to road wheels in the ordinary way.

Ample brake power is supplied. A pedal actuated brake clutch takes effect on the first gear wheel shaft. A hand wheel just operates two powerful band brakes on the hubs of the driving wheels, and when these are applied the further rotation of the wheel applies two most effective tire brakes on the driving wheels. It is claimed that when travelling on the top notch the car can be brought to rest within eight yards.

The main frame is carried on semi-elliptical springs at the rear, the frame and springs being outside the driving wheels, and by spiral springs on the steering axle, which are



contained in horn plates. The wheels have wooden spokes and felloes built upon cast steel naves and steel tires. The tires of the driving wheels are provided with cross plates, and those of the steering wheels with annular rims of less width than the tread to afford easy starting on hard ground. The driving wheels are four feet diameter and six inches in width, and the steering wheels three feet diameter and three and one-half inches in width. Although not demonstrated on the afternoon of the trials, owing to the soft nature of the Palace road surfaces, it is claimed that this war car will climb a gradient of one in seven and a half with a full load.

Ascan be seen from the illustration, the armour skirt, which is of 6 mm. Vickers steel, and quite impervious to small arms (0.303) and projectiles, completely encircles the car frame. It is of crinoline shape and flattened longitudinally, but is provided with a ram fore and aft set at an angle of about 45 degrees. The length over all is 28 feet, beam 8 feet, and height of top side of skirt 10 feet from the ground. The bottom edge of the armored skirt is 18 inches above the road level.

Originally the skirt was fixed rigidly to the tubular frame, but it having been found that the road vibration shook the rivets loose, the skirt, as seen, is hung on semi-elliptical springs, which themselves are mounted on steel trestles braced and stayed to the main

frame. The swinging action thus afforded the skirt has been found to increase its impenetrability. Distance links are provided to prevent excessive lateral movement. In the ends of the skirt provision is made for the storage of ammunition, and, if necessary, the road wheels can be protected by curtains of chain mail.

Although invited to attend, no official of the War Department was present.

Ubiquitous Urchins.

That there are two sides to every question is a very trite saying, albeit a true one. A side not often referred to is touched upon by a correspondent of the Sun, who says:

"While I fully agree with you in the statement that no automobile should be run past a child unless the driver is sure the child sees it, yet if you would take a ride through East Thirty-ninth street to the river you would find the children delight in standing in front until the last second, just to scare you, while their playmates assail you with stones, tin cans or any refuse within reach. I had been in the habit of running through that street twice a day, but had to desist on account of the bombardment. It is so in many other parts of the city, and the slower one runs the more dents he has to show for his care."

There are many automobilists who will vouch for the accuracy of these statements, or even call them entirely too mild. The Motor World man has found a number of instances where much worse treatment has been visited upon unoffending automobilists. Certain sections of the city, notably those near the two rivers, are almost impassable.

"A short time ago I had occasion to go to the freight yards of the New York Central Railroad, at Thirty-third street and Tenth avenue, and was almost mobbed by small boys," remarked one automobilist to him. "A crowd of them happened to be near a loaded coal car, and with one accord they began to use it as an ammunition wagon. They pelted me good and hard, and I had to put on steam and make off as fast as I could. I only stopped long enough to give a couple of the larger boys a pummelling, and if I had not gone then I would have been mobbed. Of course, there was not a policeman in sight."

Maxim on Ignition Troubles.

Hiram Percy Maxim was listened to with great interest by a good sized audience on Wednesday night at the rooms of the Long Island Automobile Club, the occasion being the fortnightly talk. He took for his subject "Electric Troubles with Gasolene Machines," and treated it exhaustively. Ignition in all its phases was described, and the speaker took occasion to speak at length on the things which were likely to trouble contestants in such an event as the endurance run of the club scheduled for Saturday next.

Mr. Maxim goes to Providence, R. I., where he is booked to deliver a similar talk to-night. He will return to New York Friday and take part in the Long Island run as one of the official observers.



COMING TO ONE TYPE

Indications Point to a General Standard of Body Design in all Classes.

The time is not very far off when the foreign type of motor vehicle will have ceased to be distinctive of the gasolene automobile. Steam and even electricity are encroaching on the field in which the gasolene vehicle once reigned supreme—a fact which speaks volumes for the popularity of the bonneted, rakish-looking vehicle.

One of the most striking examples of this tendency is found in an English car, styled the Miesse. As the illustration will show, it bears all the earmarks of the gasolene type, and it takes a very close inspection to bring out the difference. Like the French Serpollet and—in a somewhat less degree—the American White, the flash system of steam

was doing business under the name of the Republic Motor Vehicle Co., and that Kenkel conceived the idea of incorporating the firm under that name Feb. 1, 1901. Afterwards Linton entered into negotiations with the United States Government preparatory to making a contract for carrying the mails in Minneapolis. These negotiations culminated in the making of a contract for eighteeen months, for which the government agreed to pay the vehicle company \$17,312.65 annually.

It also appears from the complaint that before all the vehicles were ready for operation Kenkel refused to comply with the terms of the contract which Linton alleges he made; in this, that he failed to furnish the necessary funds to finish the work on four of the vehicles. Linton alleges this was done for the purpose of decreasing the value of his (Linton's) stock in the company.

The complaint also alleges that Kenkel went to Washington in an endeavor to have the Postmaster General rescind the contract,

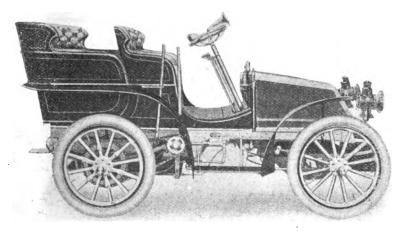
COMMERCIAL VEHICLES

Why Don't They Make Their Appearance, is the Query put by one man.

"There is one thing I cannot quite get through my brain," said the man who does not know as much about automobiles as he hopes to know, "and that is why automobile makers are so infernally slow in developing heavy traffic vehicles.

"I have been told that at least one-half of the manufacturers believe that the real future of the industry rests in vehicles of the sort, and that most of this number have a wagon or a truck or a van or something of the sort 'up their sleeves.' What I'd like to know is why they are keeping them there. Excepting delivery wagons, I've seen practically nothing of the sort in practical use.

"Of course, I do not pretend to know any-



MIESSE STEAM VEHICLE.

generation is employed, and the claim is made that the vehicle can be run at a cost of one farthing—one-half cent—per mile.

The boiler, which is of the flash type, is placed under a bonnet forward of the dashboard. The burner, which consumes ordinary kerosene, is contained within an asbestos-lagged metal case inclosing the boiler tubes; it consists of two tubes about 2¼ inches in diameter, joined together at right angles, and lying along two sides of the firebox.

The engine is of the three-cylinder singleacting horizontal type, carried beneath the footboard, having its mushroom inlet valves above and its exhaust valves below the cylinders. The water pump is fitted with an automatic by-pass. A tier of condensers is set in front of the vehicle, and a horizontal nest of plain tubes is carried beneath the floor of the car.

Partners Fall Out.

Considerable light is thrown on the causes of the failure of the Republic Motor Vehicle Co., of Minneapolis, Minn., by the bill of complaint filed last week in a suit brought by John Fallis Linton against his former partner, Herman H. Kenkel.

It appears from the complaint that Linton

which that official refused to do. Linton alleges that Kenkel, in order to affect the business of the company, made an application for the appointment of a receiver, which application Linton resisted and Kenkel was forced to abandon the receivership idea.

He alleges further that while he was absent from the city Kenkel, without any authority, made and executed an assignment of the company's property for the benefit of its creditors, all of which, Linton asserts, was done for the purpose of making his stock—one-half of all the stock issued—valueless. He therefore asks the court to ward him \$30,000 damages.

Hudson County Club Officers.

The annual meeting of the Automobile Club of Hudson County was held at Jersey City on Tuesday night, and the following officers were elected: M. A. G. Evans, president; Dr. L. Bauman, vice-president; Frank Eveland, secretary-treasurer, and G. H. Wilson, Dr. L. A. Opdyke, George E. Blakeslee and E. V. Kiersted to the Runs and Tours Committee. The club will co-operate with the A. C. A. in placing signposts on the Hudson County Boulevard, over which it will have a club run on Saturday afternoon.

thing about automobile construction, but I do know that when I was quite a few years younger than I am, and when I lived in the West, I had a deal to do with steam threshing machines, and I know they never had any trouble getting over the roads. Many a time have I helped tow another heavy thresher up hill and down at eight or nine miles per hour, and had tugging matches with rival machines. It is the remembrance of these things that makes me wonder why automobile makers are so slow in perfecting freight carrying vehicles.

"Why cannot they turn to the steam thresher and learn something?"

Rewarded at Last.

After weary months of waiting six Rhode Island automobilists are happy. They received last week that number of Winton touring cars, being the first instalment of the lot ordered by members of the Rhode Island Automobile Club.

The pleased owners are R. Lincoln Lippitt, Henry G. Martin, Howard Sturges, Henry F. Lippitt, George W. Kent and Joseph E. Fletcher. Several of the vehicles were out the next day and attracted considerable attention upon the street.



FANCIED BY FOREIGNERS

Garments Designed to Afford Both Senes Protection From the Elements.

Mud and slush having become a thing of the past, dust is now the automobilist's bane—the enemy whose insidious advances can never be entirely repelled, no matter how elaborate the precautions taken. At best these only serve to alleviate the nuisance.

The impalpable powder penetrates everywhere. It fills one's eyes, ears, mouth and throat and, worst, of all, hair. The harassed one can scarcely see for it, talking becomes an effort and is seldom indulged in, even the hearing seems to be affected. It seems almost intolerable, and relief is sought from any quarter.

Across the water more attention has been paid to the matter than here. Three "allevi-



ators," as they might be called, are ilustrated. The coats, one for each sex, come from London, the toque and mask from Parls. The former are made from very light material, with deep shaped collar to protect the back of the head, ears and hair. It can be quickly slipped on and off, and keeps the clothes and hair absolutely free from dust. It is made large to go over overcoat if required.

The toque and mask are much more elaborate protectors. The toque, which is of velvet, is simple, and sets close down on the coiffure, the mask being of delicately toned isinglass. It is, of course, transparent and is fastened on either side of the toque by means of a hook and ring let into the isinglass.

A light silver chain raises it entirely, drops it to cover the chin, or fixes it at varying levels. It efficiently protects the skin, so preventing the hot, empurpled flush which is apt to result from lengthy exposure to sun and air, and which in time, becoming chronic, is anything but becoming.

Departures from the rules laid down by the conventional habiliament makers are demanded by the exigencies of the case. Sartorial adornment is little thought of; it is enough if the form is clothed and protected. On these lines was the nonedscript garment



shown designed. It is not pretty. Not even its creator, M. Ernest Cuenod, will claim



that. But it is admirably adapted, particularly in conjunction with the cap, also M.



Crenod's design, to afford the automobilist on French roads immunity alike from the icy blasts and the blinding clouds of dust.

Automobile 'Bus Caused Trouble.

Rather a sudden ending has come to the project to operate an automobile 'bus line between Murfreesboro and Woodbury, Tenn. The automobile owned by the company is now held by the Clerk and Master Marshall, of Nashville, as temperary receiver, and will remain in his possession pending the settlement of difference between P. D. Carr, of Nashville, and B. A. Puckett, of Camden County.

In the Chancery Court Puckett filed a bill against Mr. Carr reciting the fact that he was to pay Mr. Carr the sum of \$1,500 for a half interest in the automobile line, Puckett to furnish the money by which the automobile was to be re-equipped with steam instead of gasolene appliances.

Puckett says he spent \$1,178.95 in reequipping the machine, and that when he told Carr that it was not up to the contract and wanted his money back the latter informed him that he (Carr) had sold his interest to J. W. Yates, of New York, who is made a defendant in the bill. Charges of fraud are made, and the bill is to collect the money paid out by the complainant.

Medal for Hill Climbing.

An echo of the Caillon hill climbing con-



test, which took place in France last autumn and attracted wide attention, is found in the awarding of the prizes to the winners of the contest. The illustration shows the obverse and reverse sides of the medal awarded to the Napier car, which took first place.

Recent Incorporations.

New York, N. Y.—American Vehicle Tire Co., with \$50,000 capital, to manufacture rubber tires.

Amsterdam, N. Y.—Amsterdam Automobile Co., with \$25,000 capital. Directors, George I. Herrick, William Carpenter and George E. Smealie, all of Amsterdam.

Chicago, Ill.—Auto Rapid Transit Co., with \$50,000 capital, to manufacture and operate motor vehicles. Incorporators, Louis A. Boening, Frank C. Roundy and John McFadden.

Akron, O.—Colonial Tire and Rubber Co., with \$60,000 capital, to manufacture and sell rubber goods.

Chicago, Ill.—Clark Tire Co., with \$50,000 capital. Incorporators, A. D. Clark, R. H. Croninger and C. W. Hills.

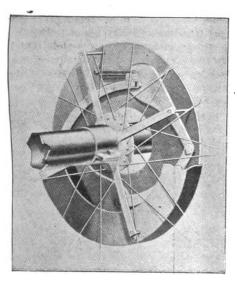
The Eureka Automobile Agency will open a salesroom and storage station at 2,285 Eighth avenue, near One Hundred and Twenty-second street, New York.



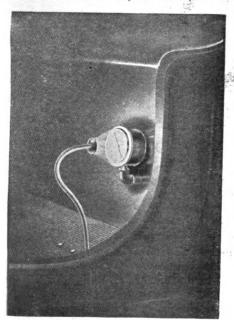
MADE BY MOTT

Clever Device for Gauging Speed Proves a big Success—Different Colored Electric Lights Record the Change of Pace.

Speed plays so important a part in automobiling that the need of some convenient and approximately certain method of gauging it has always been felt. The marked increase



in the number of motor vehicles, and the consequent activity of the authorities in many cities and towns to repress all speed ex-



cesses, real or allegéd, has but made the need more plain.

There is scarcely an automobile user to whom an instrument capable of gauging his exact rate of speed will not appeal. Quite aside from the satisfaction he may feel at knowing just what he is doing, whether it be up hill or down or on the level, there is the certainty that he cannot go wrong unintentionally when he has a faithful companion of this sort. The slightest variation of speed is instantly recorded by it. In place of guess-

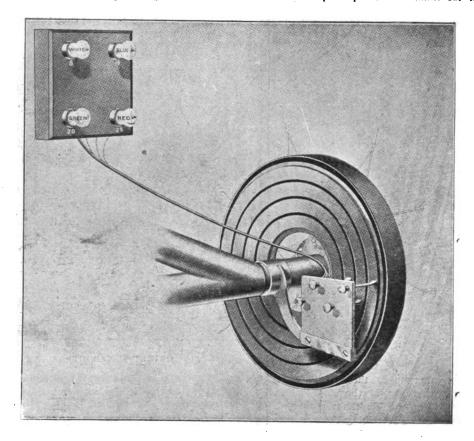
work there comes certainty. From the verdict of an accurate instrument there is no appeal. The increasing upmber of State ordinances limiting speed and the strictness with which they are being enforced greatly enhances the value of such a device.

Particularly timely therefore is the appearance of a speed indicator which comes very close to being ideal. It unites thorough practicability with convenience, sightliness, comparative simplicity and moderate price. Such a rare combination of qualities is not often found. In the case under notice it tells its own tale and appeals with directness and force to whoever sees it.

The device is now furnished for the mar-Speedometer, is the invention of Laurence Mott, the son of the head of the J. L. Mott Iron Works, who is pursuing a course of against these rings and are connected by wires with a series of four small glow lamps grouped on a porcelain base fixed to the dashboard. A return wire leads from the lamps to a battery of dry cells stowed in a convenient place on the vehicle, and from thence through the metal of the wheel bearings back to the weights. The lamps have globes of different colors and become illuminated in succession as the different speeds are reached.

The device as now furnieshed for the market indicates four speeds, viz., 8, 15, 20 and 25 miles an hour, although they can be equipped for higher, lower or intermediate speeds. A lacquered casing protects the weights and their contacts from dirt and mud.

One of the principal claims made for the



electrical studies at Harvard University. Mr. Mott is marketing both his speedometer and an electric gauge illuminator from 106 Sudbury street, Boston, Mass.

The speedometer is simple in construction, the working parts being a pair of flat centrifugal weights pivoted on a vulcanite disk, which is bolted to either one of the front or rear wheels of any motor vehicle made, on the inner side, close to the hub.

The weights are connected by links, so as to work in unison, and are drawn in by springs. As they fly out by centrifugal force due to the rotation of the wheeel, a contact brush carried by one of them moves across a series of four contacts connected in circuit with an equal number of collector rings mounted on the opposite side of the disk from the weights. Brushes fixed to an insulating support on the axle housing press

device, in addition to its working simplicity, is the fact that the indicating devices are mounted directly in front of the chauffeur, who can perceive his speed at a glance without appreciably diverting his attention from the road, by simply noting the particular color of light which burns. The lights show readily in the daytime and, of course, have the advantage of being conspicuous at night.

No troublesome driving connection from the wheel is necessary, as the weights are on the wheel, and the only connection from the wheel to the body is an electrical one. The weights are opposite acting and counterbalanced by each other, so that any position which they assume under the influence of the speed of the vehicle is not disturbed by vibration due to the roughness of the road.

A ride in a vehicle equipped with the



speedometer taken by a Motor World representative demonstrated that the claims made were well founded and that the device was thoroughly practical. The way in which the lights changed from one color to another, as the speed was varied, was astonishing. The eye could, of course, follow these changes without any interruption being made in the road view, and a little practice was all that was necessary to tell just what each color meant.

Orient 1902 Runabout.

The selection of a motor vehicle in the present stage of their manufacture is a question well worth considerable thought and a thorough investigation. The price which it is necessary to pay for a carriage of this kind, even of the smaller varieties, is more than the average person would wish to lose or throw away on a worthless article, is the

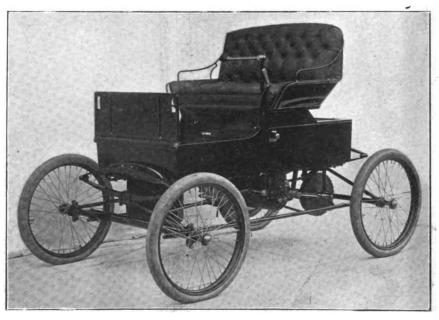
speed gear to operate, starting the carriage slowly forward. A further movement of the lever forward will engage the direct gear, and the carriage will then take a speed according to the pressure given by the foot on the throttle. To stop the carriage the foot is simply lifted from the throttle and the lever pulled quickly back as far as possible against the reverse, which acts as a powerful brake until the carriage stops, and then if still held back will cause the carriage to move slowly backward until the lever is alowed to take its natural upright position. When the carriage is running backward a slight pressure of the lever forward will also act as a brake to stop it.

The carriage is further provided with a powerful emergency brake acting upon the rear axle, but this it is seldom necessary to use, except to lock the carriage fast when

Gasmobile Thoroughness.

From a huge monument of incapacity, incompetence or worse the Automobile Co. of America, of Marion, N. J., has been completely transformed through the energetic efforts of Receiver H. C. Cryder, and is now on a thoroughly sound foundation. As a matter of fact nearly all the work previously done has been thrown in the scrap heap, and everything, from the foundation of the motor to the finish of the carriage, has been changed.

As an instance of how thorough these changes have been it may be cited that on the new four-cylinder tonneau vehicle which is now being put through there are but twelve pieces used of the 700 or more of the original production. This new four-cylinder tonneau vehicle, by the way, promises to stand in the front rank, not only of American



ORIENT RUNABOUT

clear summing up of the situation in the opening paragraphs of the 1902 catalogue just issued by the Waltham mfg. Co., of Waltham, Mass., describing their new gasoline runabout.

The vehicle is driven by an 8 h. p. high speed motor, and besides being neat and attractive in appearance, it is handled conveniently and with ease. There are two speeds ahead and one reverse, all operated by a single lever, which also acts as a general utility brake. There is, aside from this, a powerful emergency brake, controlled by the foot and acting directly on the rear axle. The speed of the carriage is governed by pressing the foot on a throttle which will give a range of speed from 4 to 20 miles per hour without the use of gearing.

The controlling mechanism consists of a lever located on the left hand side of the carriage. In the position shown in cut, the lever is not in action, and the motor is free to run quietly while the carriage is at rest. To start the carriage it is pushed forward gently a few inches, which causes the slow

left standing alone, the controlling lever being ample to handle the carriage under all ordinary circumstances.

Two Week's Exports.

British Australia—1 case auto vehicles, \$30. British West Indies—1 case auto vehicles, \$115.

Bremen—3 cases motor vehicles, \$1,640. London—18 cases motor vehicles, \$14,014. Mexico—1 case auto vehicles, \$1,000; 1 case auto material, \$30.

Southampton—5 cases motor vehicles, \$3,100.

British Australia—6 cases motor vehicles, \$825.

British East Indies—3 cases motor vehicles and parts, \$649.

Genoa-1 case auto vehicles, \$2,200. Hamburg-1 case auto vehicles, \$52.

Havre—2 cases auto parts, \$4,556.

Liverpool—7 cases motor vehicles, \$3,300. London—46 cases motor vehicles and parts, \$36,042.

Mexico-1 case motor vehicles, \$1,000.

made machines, but of any machines in the world. Not even the much heralded French machines have any advantage over this in point of power, reliability and mechanical efficiency, while in workmanship, design and finish the Gasmobile can be termed a gilt edged automobile.

As a natural consequence the stockholders of the company are highly elated, and can now see daylight where all was dark before. In the regular touring models work is being rapidly pushed, as well as on several special machines. As an instance of the class of work these cars are doing it is interesting to note that a special Gasmobile 12 horsepower phaeton made for Colonel Max Fleischmann, of Cincinnati, was recently driven by Colonel Fleischmann from that city to Dayton, O., a distance of 126 miles, in seven hours.

To dealers and individuals who are on the lookout for a thoroughly reliable American made tonneau car, the product of the Automobile Co. of America is sure to make a strong appeal.



Latest Overman Vehicle.

An important addition to the number of steam vehicles which depart radically from the conventional type is the Victor steam touring car, made by the Overman Automobile Co. The first of these vehicles will make its appearance on Saturday, it being entered in the 100-mile endurance run of the Long Island Automobile Club.

The vehicle is designed along the lines made familiar by the foreign type of gasolene car. A detachable tonneau body is fitted, or a touring box, a rumble seat or a plain rear body, as desired. Thus equipped it has a seating capacity ranging from four to six persons. The vehicle weighs, empty, 2,325 pounds; including fuel, supplies and equipment, 3,000 pounds. The wheel base is 84 inches and wheel tread 54 inches. A steel angle iron frame is used, and all bearings, engine journals, etc., are plain.

the concern will be delivering five vehicles per day. Had they not been so careful of the reputation gained in the last quarter of a century, they could have supplied carriages months ago, but, having the adjective "high grade" always in mind, they have withheld deliveries until their governor and other details were perfected and the carriage as a whole able to speak for itself.

The Motor World.

With the exception of the tires, body and springs, the Rambler carriage is made in the Jeffery factory.

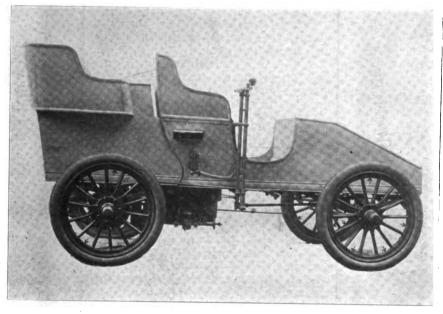
For Right Hand Control.

Another lot of gasolene touring cars, numbering fifty, is being put through the Toledo works of the International Motor Car Co. A slight change has been made in these vehicles since they were exhibited at the Chicago show. Hereafter the control levers will be on the right hand side of the car, this

For Two or Four Passengers.

Recognizing the fact that there are times when a two-passenger car is too small and at other times a four-passenger car too large, the Prescott Automobile Mfg. Co., 83 Chambers street, New York City, have not only provided for both contingencies, but have added much to the design of steam vehicles, as shown in this week's full-page illustration of their touring car. The vehicle is shown with the folding dash, for the front seat, closed and as used for two passengers.

The vehicles are furnished with or without top; in the latter either open or victoria top is furnished at \$100 advance over the price of the open-seated vehicle. In connection with a burner claimed to be indestructible a pilot light is equipped that holds the steam to any desired pressure without blowing out. Superheated steam is used and extended mileage provided for to the gallon of



THE NEW VICTOR.

A horizontal high-pressure two-cylinder engine, with bore 3½ inches, stroke 6 inches, maximum engine speed 500 revolutions per minute, normal cut off 1-3, indicated horse-power 14, throttle ¾ inch, reverse by link motion, is employed. Three gasolene tanks are used, having a capacity of 26 gallons; they are all located in forward part of body.

The boiler is of the vertical fire tube type, having 756 ½-inch tubes; the diameter is 23 inches, depth 18 inches. The transmission is by sprockets on countershafts in combination with a chain drive. There are band brakes on each rear wheel.

Rambiers are Ready.

No little annoyance has been caused T. B. Jeffery & Co., Kenosha, Wis., by reports circulated to the effect that they would not be able to make deliveries of Rambler gasolene vehicles this year. The reports are, of course, utterly without foundation. At least 500 vehicles will be delivered this year, 200 of them being in process of assembling at the present time. By the end of this month

change being made to fill orders entered for this construction. Judging by the experience of the company, the mooted question as to the proper side for the operator to occupy is answered only by building both styles of automobiles. For instance, Waverley electric carriages are built controlling from the left side, while Toledo steam carriages are operated from the right, and the gasolene touring cars have been built with the levers on either side to meet the requirements of different customers. The general preference is, however, to locate the operator's seat on the right.

Air and Water Pumpa

THE UNION STEAM PUMP CO., BATTLE CREEK, MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.

fuel and water. The reverse lever is operated by foot; the engine is incased and automatic lubrication assured.

The running gear is of new design and extra heavy. Two double-acting brakes are used on rear hubs, strain being taken away from the compensating gear. From the seat are controlled the operations of the steam air and steam water pumps. Throughout the vehicles have been constructed in a careful, painstaking manner. Absolute safety, abundance of power, freedom from noise and vibration, accessibility of parts, ease of control, economy of fuel and elegance of design and finish are features found in the Prescott

The general specifications are as follows: Wheels, 28x2½ inches, with heavy steel spokes and single-tube tires; tread, 54 inches; wheel base, 68 inches; weight, with tanks filled, 1,275 pounds; capacity of fuel tanks, 7 gallons; of water tanks, 32 gallons; boiler, 16 inches, with fire tubes; bearings, American roller to rear and ball to front.



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THE HIT OF THE SEASON. Our New "AUTOSILK" CAP.



The lightest and swellest cap ever designed. FOR SUMMER WEAR. WATERPROOF. Made also in dull finished Kid

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Our Ladies' Automobile Coats

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Vests, etc.

To the individual who does not know where to get the best to be had, write to us and we will tell you where to get them.

DEMMERLE & CO.

248 West 23d Street,

NEW YORK CITY.

The Week's Patents.

697,153. Variable Speed Gear for Motor Vehicles, Cycles or the Like. James R. Madan, Salisbury, England. Original application filed July 14, 1900; Serial No. 23,612. Divided and this application filed March 15, 1901. Serial No. 51,283. (No model.)

Claim.—1. The improved variable speed and reversing gear comprising the combina-tion with the axle of two toothed rings oppositely acting one-direction clutch mechanisms, connecting said rings and axle, a gear wheel disposed between the toothed rings one-direction clutch mechanism between said gear wheel and axle, a set of independent double spur wheels on one side of the gear wheel gearing with the said toothed ring on that side and an internally toothed rim on the gear wheel and another set of independent double spur wheels on the other side of the gear wheel gearing with the toothed ring on that side and an externally toothed rim on the gear wheel and means for entirely disengaging the clutch between the main gear wheel and the axle, all substantially as set forth.

697,200. Transmitting Gear. James S. Copeland, Hartford, Conn., assignor to American Bicycle Co., of Jersey City, N. J., and New York, N. Y., a corporation of New Jersey. Filed Sept. 16, 1901. Serial No. 75,655. (No model.)

Claim.-1. Transmitting gearing comprising a driver, a driven part, intermeshing gears carried by said driver and driven part respectively, and a clutch interposed be-tween one of said gears and its carrier, said clutch comprising a driving member, engaging parts positively carried thereby, a toothed member and means adapted to be inserted between the engaging parts and the toothed member to retain the engaging parts out of engagement with the toothed member.

097,391. Woven Tubular Fabric. William Beck, Lawrence, and James F. Preston, Bosten, Mass., assignors to the Preston Hose and Tire Co., Everett, Mass., a corporation of Maine. Filed Jan. 6, 1900. Renewed Jan. 22, 1902. Serial No. 90,846. (No m del.)

Claim.-1. Fabric hose for tires, the same comprising a continuously woven tube, and a plurality of tubularly continuous reinforcing plies overlying the tread portion of said tube and stitched together and to the tube.

697,392. Art of Weaving Tubular Fabrics. William Beck, Lawrence, and James F. Preston, Boston, Mass., assignors to the Preston Hose and Tire Co., Everett, Mass., a corporation of Maine. Filed Jan. 6, 1900. Renewed Jan. 22, 1902. Serial No. 90,847. (No specimens.)

Claim.-1. The improvement in the art of weaving tubular reinforced fabric for vehicle tires, the same consisting in weaving a continuous tube and simultaneously weaving a multi-ply reinforce over the tread porti n thereof and uniting the same to the tube proper.

697,390. Woven Tubular Fabric. William Beck, Lawrence, Mass., assignor, by mesne assignments, to the Preston Hose and Tire Co., a corporation of Maine. Filed Oct. 29, 1898. Renewed Jan. 22, 1902. Serial No. 90,845. (No specimens.)

Claim.-1. A tire tube of continuous woven fabric having a woven reinforcing ply overlying the tread portion of the tube and a second woven reinforcing ply overlying the first, together with two sets of stitching warps interwoven with the same weft

Prescont STEAM TOURING CARS.

Superior in Style, Design and Finish.



New Indestructible Burner.

Pilot Light. 'Holds Steam to Any Desired Pressure and Never Blows Out. American Roller Bearings.

Superheated Steam.

Greater Mileage to the Gallon of Fuel and Water than any Other Steam Vehicle.

Reverse Lever Operated by the Foot.

> Encased Engine. Automatic Lubrication.

Running Gear, New Design, Extra Heavy.

Two Double-Acting Brakes on Rear Hubs, No Strain on Compensating Gear. Large Fuel and Water Capacity

Steam Air and Steam Water Pumps. both operated from the seat.

Weight of Cars, 1250 lbs.

Write for Catalogue and Agent's Proposition.

Prescott Automobile Mfg. Co. 83 Chambers St., New York City.



Furrier and Leather Clothing Maker

now takes orders for Ladies' Automobile Coats for immediate delivery. Also Gentlemen's Leather, Auto Coats, Trousers and Caps.

1225 Park Ave., Near 95th St., New York.



threads of the first reinforcing ply, one set of said stitching warps being interwoven with weft threads of the tube proper and the other set being interwoven with weft threads of the second reinforcing ply.

697,626. Rubber Vehicle Tire. Frank H. Hyde, Toronto, Canada. Filed Aug. 15, 1901, Serial No. 72,902. (No model.)

Claim.—1. The combination with a wheel having a felly and a metallic tire provided with coincident apertures; of the rubber tire, the apertured metallic band arranged at the inner side of the rubber tire and on the exterior perimeter of the metallic tire of the wheel and the headed interiorly threaded nuts extending through the apertures of the metallic band and resting in the apertures of the metallic tire of the wheel; said rubber tire, metallic band and nuts being vulcanized together, and headed and threaded bolts extending through the apertures of the wheel felly and incasing the interioriy threaded nuts.

697,720. Automobile. Henry K. Holsman, Chicago, Ill. Filed July 31, 1901. Serial No. 70,346. (No model.)

Claim.—1. In an automobile, the combination with the traction wheel mounted on a stationary axle or bearing and having a pulley wheel thereon, of a driving shaft mounted in bearings movable relative to the traction wheel bearings, a driving pulley mounted thereon, a roller disk secured to said shaft to rotate therewith in the plane of the traction wheel, a belt or rope connecting said pulley wheels, means for continuously rotating the driving shaft, and means for moving the driving shaft toward the traction wheel so to release the driving belt and subsequently apply the roller disk to the traction wheel to reverse it.

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FOR STEAM, GAS OR ELECTRIC AUTOMOBILES

ARE ACCORDED THE HIGHEST TESTIMONIALS.

Send for free samples and pamphlet.

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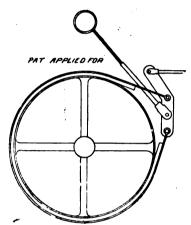
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BRENNAN MFC. CO., Syracuse, N. Y.

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REVISED EDITION

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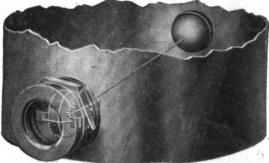
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The only device of its kind Always tells at a glance all the gasolene that is on hand. Can be readily applied to the tank on any style of vehicle. Saves waste and quickly earns its price. Loss of air pressure, worn threads on plugs and fire dangers on steam vehicles entirely eliminated.

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Reputation International

Wood Wheels

FOR AUTOMOBILES

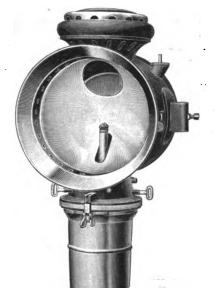
Established 1855.

NEWARK, N. J.

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Don't fool with others when you can satisfy your customers surely with the Solar.

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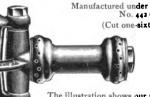
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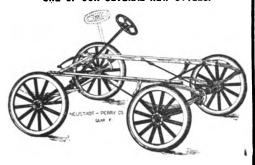
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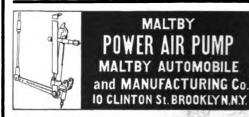
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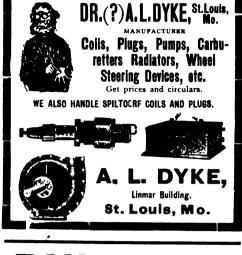
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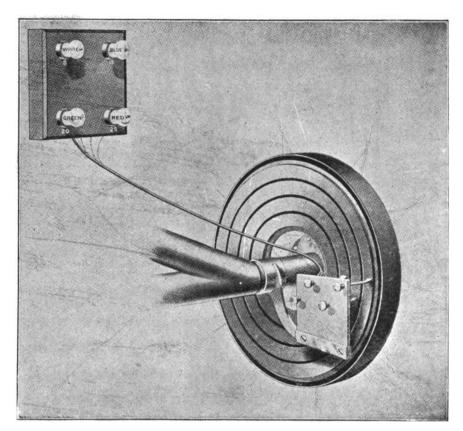
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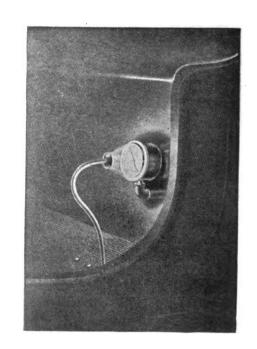
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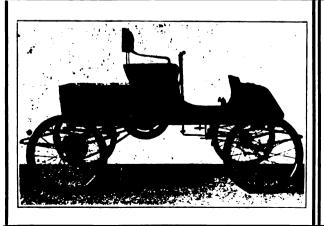
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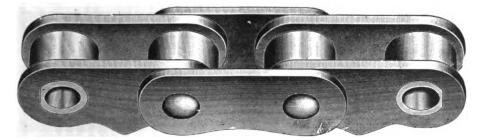
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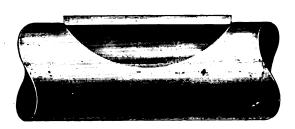
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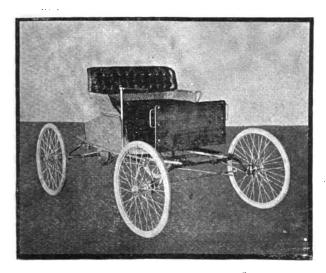
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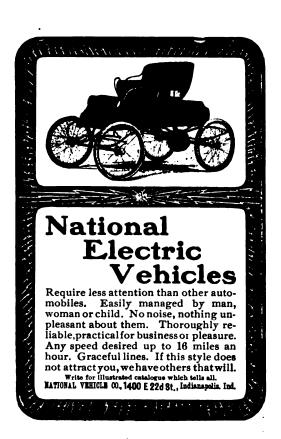
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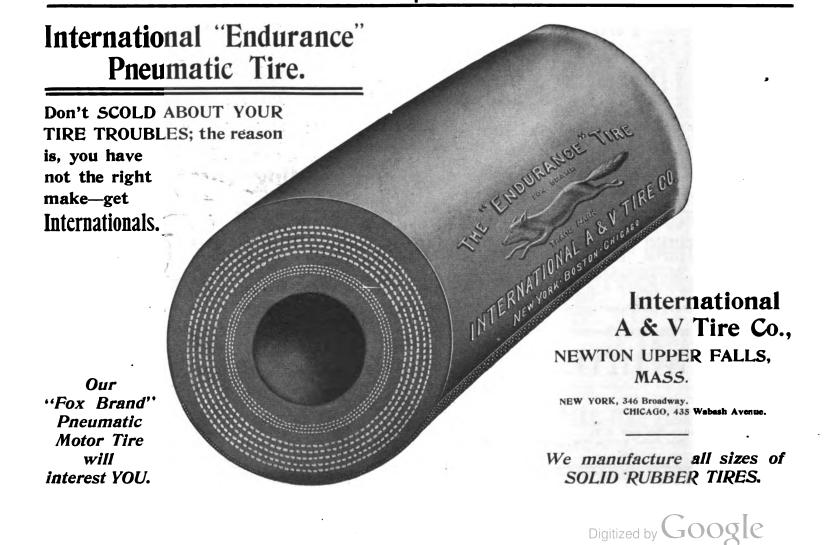
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THE MOTOR WORLD.

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Volume IV.

New York, U. S. A., Thursday, May 1, 1902.

No. 5

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After Peddling his Patents he Finds an "Angel" and the "Angel" Cries "Beware!"

After being peddled the length and breadth of the automobile trade—they were offered to one prominent concern for less than \$250—Rudolph M. Hunter, who owns a considerable collection of patents bearing on motor vehicle construction, finally connected with that rather unfathomable corporation, the International Power Co., of this city, whose stock has been bobbing up and down like the float of a fishline.

Immediately the connection was made the International Power Co. caused to be published in nearly all the leading New York newspapers great, spread-eagle advertisements warning automobile manufacturers and users against infringements of the Hunter patents, and conveying the further threat that infringement would be "vigorously prosecuted." The patents in question are as follows: No. 462,926, Nov. 10, 1891; No. 593,-051, Nov. 2, 1897; No. 446,817, Feb. 17, 1891; No. 385,200, June 26, 1888; No. 397,235, Feb. 5; 1899; No. 400,404, March 26, 1889; No. 412,-659, Oct. 8, 1889; No. 422,308, Feb. 25, 1890; No. 385,068, June 26, 1888; No. 382,876, May 15, 1888; No. 363,466, May 24, 1887; No. 313,-884, March 17, 1885; No. 347,937, Aug. 24, 1886; No. 443,677, Dec. 30, 1890; No. 445,144, Jan. 20, 1891; No. 445,521, Jan. 27, 1891; No. 562,766, June 23, 1896; No. 434,871, Aug. 19, 1890; No. 432,661, July 22, 1890; No. 425,883, April 15, 1890; No. 424,406, March 25, 1890; No. 385,672, July 3, 1888; No. 399,599, March 12, 1889; No. 403,754, May 21, 1889; No. 397,-857, Feb. 12, 1889; No. 417,920, Dec. 24, 1889; No. 429,687, June 10, 1890; No. 432,136, July 15, 1890; No. 432,623, July 22, 1890; No. 433,-170, July 29, 1890; No. 433,754, Aug. 5, 1890; No. 434,147, Aug. 12 1890; No. 434,148, Aug. 12, 1890; No. 437,158, Sept. 23, 1890; No. 551,-587, Dec. 17, 1895; No. 541,165, June 18, 1895; No. 452,920, May 26, 1891; No. 451,155, April 26, 1891; No. 385,053, June 26, 1888; No. 588,-528, Aug. 17, 1897; No. 400,830, April 2, 1889; No. 572,706, Dec. 8, 1897; No. 385,180, June

26, 1888; No. 402,080, April 23, 1889; No. 405,-668, June 18, 1889; No. 424,206, March 25, 1890; No. 432,237, July 15, 1890; No. 320,092, June 16, 1885; No. 583,880, June 1, 1897; No. 441,305, Nov. 25, 1890; No. 431,720, July 8, 1890; No. 425,077, April 8, 1890; No. 424,207, March 25, 1890; No. 418,893, Jan. 7, 1890; No. 384,908, June 19, 1888; No. 384,562, June 12, 1888; No. 377,107, Jan. 31, 1888; No. 384,912, June 19, 1888; No. 384,911, June 19, 1888; No. 502,297, Aug. 1, 1893; No. 385,097, June 26, 1888; No. 385,054, June 26, 1888; No. 384,910, June 19, 1888; No. 384,576, June 12, 1888; No. 392,675, Nov. 13, 1888; No. 393,323, Nov. 20, 1888; No. 385,055, June 26, 1888; No. 383,575, May 29, 1888; No. 638,966, Dec. 12, 1899.

From the best accounts, however, and from the fact that no one in the automobile trade could be tempted to buy, it is very evident that none need be in fear of the patents or any of them.

E. P. Hoadley, the head of the International Power Co., recently purchased a number of vehicles which were formerly in use by the New-England Transportation Co., of Boston, and proclaimed his intention of establishing a transportation service in this city. This service, however, like so many International 'projects, has as yet failed to materialize. Meanwhile the securities of the concern, which went up like a sky rocket late last week, have fallen with a thud.

Pope Interests Control.

As a result of the buying of American Bicycle Co. stock that has been taking place during the past few weeks, the control of that company has passed to interests friendly to Col. Albert A. Pope. Sufficient stock to insure that control has been acquired by these interests, but, of course, no change in the management can occur before the annual election, which takes place next October.

Carrying with it, as it does, the control of the International Motor Car Co., the news is of interest to the automobile trade. As stated, however, no change in the status of the latter concern can take place before autumn at least.

Several of the directors of the American Bicycle Co. have taken advantage of the rising market in the stock to dispose of their holdings.

SIEGMAN LOSES

Can't Bring Suit to Recover Money Already Paid Him in Dividends.

In a decision handed down last Saturday Vice-Chancellor Pitney of the New Jersey Chancery Court sustained the demurrer of John Jacob Astor, George H. Day, Philip T. Dodge, Albert A. Pope, Isaac L. Rice and others, the officers and directors of the Electric Vehicle Co., to the complaint of Richard Siegman, a stockholder, who alleged that \$380,000 of dividends had been unlawfully declared and paid, and that these directors should restore that sum to the treasury of the company out of their own pockets.

Siegman said that these dividends had been paid out of the capital stock of the company and not out of its earnings, and that the directors were responsible. The defendants replied that no such suit could be maintained by a stockholder either in his own right or on behalf of his corporation.

The Vice-Chancellor took this view of the law, remarking in his decision that nothing could be "more unjust and inequitable" than to permit a stockholder to recover from directors "the very moneys which the stockholders have already themselves received." He said that the section of the law under which Mr. Siegman asked relief was intended for the benefit of creditors "where the assets of a corporation were insufficient to pay creditors."

"If," said the court, "an action can be maintained by a corporation without regard to its financial condition or interests, then I am of the opinion that its use for that purpose is highly penal, and this court will not entertain a suit for its enforcement." The court said further that whatever directors might be responsible for they could not be responsible to stockholders for moneys which stockholders had already received individually.

The death is announced from Aix-la-Chapelle, at the early age of 39 years, of Herr Franz Kupper, the first president of the West German Automobile Club.



EVENT FOLLOWS EVENT

Enough for a Three Month Program Crowded Into Two Weeks—Serpollets's Record.

French Bureau Motor World, 2 Rue d'Abbeville.

Paris, April 17.—Automobile events have lately been served up in a sort of concentrated extract, when enough has been crowded into a period of two weeks to fill

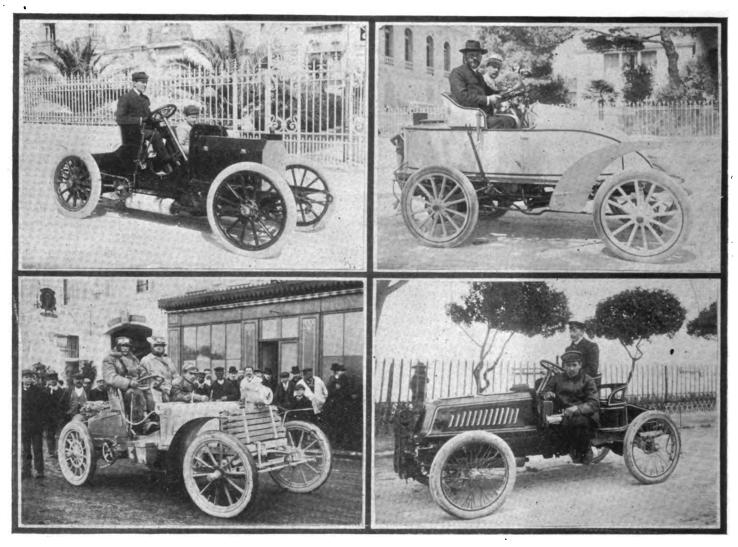
on this run of 700 miles, from the steam van to the gasolene omnibus, and forty-eight consecutive hours were spent upon the big steamer until it finally stranded a few miles outside of Dijon. Suffice is to say that of the thirteen vehicles starting from Paris ten got safely to Nice over roads that for the most part of the way had been under water, and the gradients near Dijon and along the shores of the Mediterranean were about as trying and severe as any that could be found in the country. One steam wagon came to grief on leaving Paris through skidding on

thoroughly economical. It is the greatest and most convincing demonstration of the regularity and economy of these vehicles that has ever been held.

As for the touring automobiles, the run was simply a chapter of accidents. About forty started from Paris and only thirteen reached Nice, and though the inundations were largely accountable for this state of things, still more must be attributed to the attempt at maintaining a high rate of speed. for each day they had to cover about 125 miles, and though this is not much for an

40-HORSEPOWER MERCEDES-SIMPLEX.

SERPOLLET'S 20-HORSEPOWER "EASTER EGG."



40-HORSEPOWER PANHARD

20-HORSEPOWER DARRACQ

a pretty good programme of three months. There was first a trial of industrial motor vehicles from Paris to Monte Carlo, and then a run of tourist vehicles over the same course, followed by the events of the Nice week, which was to have included the Nice-Abbazia race, but more of this hereafter.

I say little about the trial of heavy vehicles, because, however valuable they may be from a technical standpoint, they do not offer much general interest, and if a description of the trial were started it would run to a considerable length, for the adventures on the way were sometimes strange and peculiar. I accompanied all the vehicles in turn

the wet and greasy granite setts and bent the front axle; the steam van failed through the difficulty of getting suitable coal, and a Peugeot wagon had to stop when it had nearly completed the journey through a wheel collapsing after running two days on the rim, the solid rubber tire having become detached.

In view of such a small proportion of failures the trials were a great success, and the industrial vehicles—the De Dietrich omnibuses, the Panhard omnibus, the Peugeot van and travelling coach, the German Daimler wagon and the Gillet-Forest delivery van—proved themselves not only reliable but

automobile, it becomes somewhat trying for amateur drivers when continued day after day. A large number of automobiles got off the road and smashed up against trees or overturned in ditches, but happily there was no serious personal injury. If these "caravans" are to be a success they should be organized so that the amateur drivers should not be encouraged to show off the paces of their vehicles against each other, especially when the roads are rendered dangerous by the heavy rains and floods. Caravans ought to do a great deal of good in popularizing automobilism, but unless owners of vehicles are brought to see that a tour is not a race

so many failures are likely to be harmful to the pastime.

Fates were not very kind to the Nice meeting. The tourists' caravan was only a qualified success, and the La Turbie hill climbing competition narrowly escaped being a failure. La Turbie is a name that has become inseparable from the sport of winter automobilism. It lies between Nice and Monaco, not along the ordinary road by the seashore, but over a mountain, up whose flanks it winds in gradients that are none too severe, though here and there they look very steep as they are approached, and on nearing the village of La Turbie, perched behind the mountain pass, it runs practically level for a good distance. But the gradient is trying on account of its length, and also by reason of the extremely sharp turnings and bends around projecting rocks, with the precipice ready on one side to receive the unskilful or unfortunate driver. It is a competition of nerve and skill as well as of mechanical force.

On fine days the road is sufficiently dangerous for racing vehicles going at full speed. When the mountain is enveloped in clouds it is nothing short of folly to race automobiles up to La Turbie, and this was the condition of things when the event took place on Monday. The weather down below was brilliantly fine, but as the industrial vehicles wound their way up to the top to watch the race and then proceed to Monte Carlo the heavy clouds were rolling across the deep valleys, and we were in a fog so thick that we could scarcely see twenty yards ahead.

TELEPHONED TOO LATE.

The officials at the top were in a state of great nervousness, and telephoned down to Nice to postpone the start, but to their surprise the bugles sounded down the hill shortly after 9 o'clock, and then a big vehicle loomed out of the fog. This was Werner on his Mercedes-Simplex vehicle, which had mounted the 9.62 miles in 181/2 minutes. Last year he won the race in 16 minutes, but there was no question of beating records to-day. Three other Mercedes came to the top, the best time of the day being accomplished by Mr. Stead, who covvered the distance in 16:37. Mr. Stead declared that he had narrowly escaped destruction through a wheel hovering over the precipice, and he said that he would never risk his life under such conditions again. Many of the other competitors had hairbreadth escapes, the motocyclist Osmont showing a bleeding hand which had grazed against the rocks at a turning. One of the Serpollet steam carriages got to the top in less than twenty minutes, but after the Mercedes the palm was carried off by the light Darracqs, which showed up remarkably well in the competition. As for Panhards, they abstained altogether, leaving the field to their German competitors. It was with a sense of relief that the competition came to an end without serious accident, and when in less than an hour afterward we got down to Monte Carlo and looked up to the heights of La Turble there was not the vestige of a cloud.

The mile competition on the Promenade des Anglais threatened at one moment to share the fate of La Turbie. The long spen of remarkably fine weather was followed by a storm which broke over Nice at the moment of the race and lasted for three days. Fast driving was so dangerous on the cement promenade that the competition had to be postponed until Sunday. There were two events—the standing mile competition, when the vehicles were also timed over the flying kilometre, and the flying kilometre test for the Henri de Rothschild Cup.

This latter event was noteworthy for the phenomenal ride of M. Léon Serpollet on his new 20 horsepower racing vehicle. The propelling mechanism differs little from the standard types of Gardner-Serpollets, the only modification being the addition of an auxiliary pump, which allowed of more water being forced into the red hot tubes. The form of the carriage body is peculiar, the front being egg shaped so as to serve as a wind cutter and facilitate progress at very high speeds at the same time that it protects the driver from the wind resistance, which is extremely great at the speed which M. Serpollet expected to attain.

WAS IT FLYING OR RIDING?

In the Henri de Rothschild Cup test each vehicle had to carry a passenger besides the driver. M. Serpollet had on board one of his representatives, who will no doubt hesitate about undertaking such a ride again. After a somewhat slow start, M. Serpollet crossed the line at a terrific speed and fairly bounded along the cement track. Curiously enough, though the pavement is perfectly smooth, the wheels seemed to be repeatedly leaving the ground, and M. Serpollet himself declares that he had an impression of the vehicle bounding on the cement in a series of jumps, and he had no sensation of going at any terrific speed. He simply saw nothing except the pavement rushing underneath his wheels. To the spectators the impression of speed was uppermost, and they were utterly transfixed as the vehicle flew by with a long line of exhaust in its wake. The vehicle had a thousand yards in which to slow down, and when at length it stopped the passenger got down dazed and bewildered, and complained that he had been nearly suffocated in the run. He could only breathe by turning his head from the wind. M. Serpollet was somewhat surprised when he was told that he had covered the kilometre in 29 4-5 seconds, which is equal to 74.7 miles per hour-a speed which has never before been attained on the road.

FAST TIMES REDUCED.

The next best performance was that of Osmont on an 8 horsepower De Dion tricycle, who covered the standing mile in 574-5 seconds, and then came Degrais and Werner on their 40 horsepower Mercedes-Simplex, their times for the standing mile being, respectively, 1:093-5 and 1:094-5. The

light 20 horsepower Darracqs did 1:10 2-5 and 1:11 2-5, and a 3 horsepower Clément motor bicycle covered the distance in 1:12 1-5, while the big 40 horsepower Jenatzy vehicle could not do better than 1:40 3-5. In the flying kilometre, however, the Jenatzy, driven by Baron de Caters, was timed as doing 37 1-5 seconds, or a second more than Degrais's Mercedes, while the Panhards did 38 4-5 seconds and 39 seconds.

In a subsequent trial over the flying kilometre, however, some of these times were further reduced, Osmont equalling Rigal's motocycle record of 33 seconds, Baras on a Darracq doing 35 1-5 seconds, Jenatzy 35 2-5 seconds, Degrais on a Mercedes 34 4-5 seconds, and Williams on a Clément motor bicycle 40 3-5 seconds. In such short tests the big vehicles are naturally at a disadvantage, owing. to the time lost in getting up full speed.

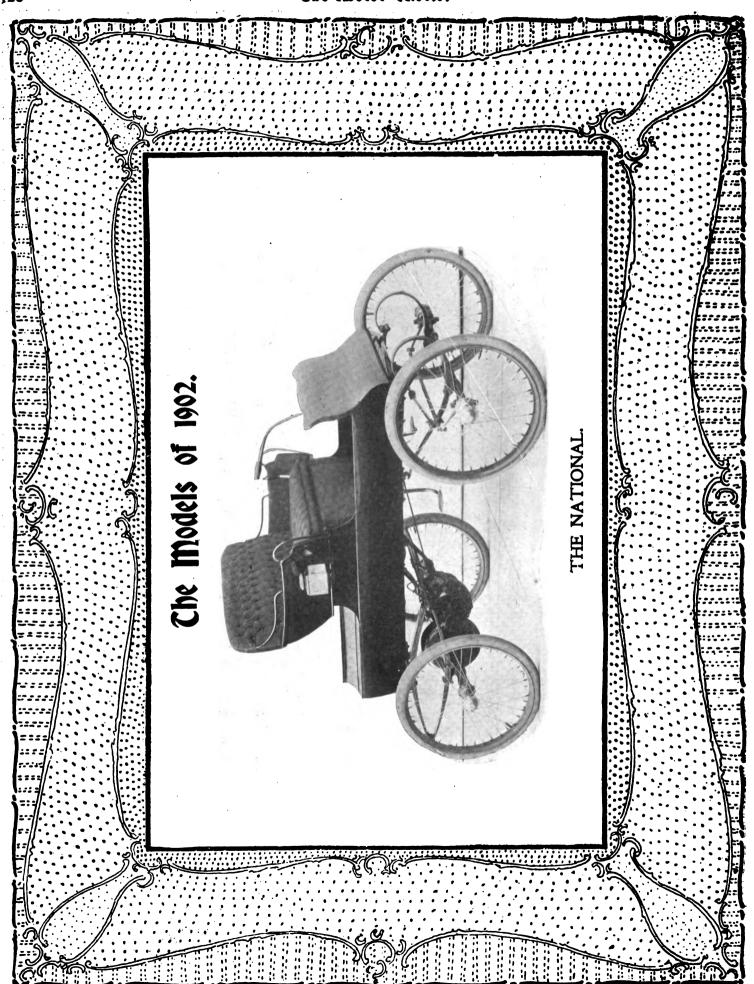
EXPENSIVE AND DISCOURAGING.

Meanwhile what had become of the Nice-Abbazia race? As we were travelling along the Mediterranean coast from Marseilles in the omnibuses and wagons at the modest rate of ten to fifteen miles an hour, rumor passed with the news that the race had been prohibited. After giving official sanction to the big event it seemed so incredible that the Italian Government should withdraw its permission at the last moment that we supposed nothing more than a hitch had occurred which could be easily smoothed over before the day of the start.

But on arriving at Nice things wore a more serious aspect. The race had been definitely and irretrievably suppressed, without any hope of the Italian Minister of the Interior going back on his word. Automobilism was in a great state of excitement, and it is difficult to say which was strongerindignation at the cavalier way in which automobilists had been treated by the Italian Government or consternation at the suppression of a race for which all the makers had been preparing vehicles at enormous cost. Not only had the racing automobiles been sent down to Nice in charge of the mechanics, but arrangements had been made for the storage of gasolene and the like all through Italy, and it was only when everything was ready and the competitors were, so to speak, waiting for the signal to start that the Italian Government stepped in to stop the race. It was probably the greatest blow that has ever been struck at the automobile industry.

As to the cause of this interdiction there are many rumors given, the official one being that part of the course would have been encumbered on the day of the race on the occasion of the market at Coni. But it was stated at Nice that the true reason was the recklessness of some of the automobilists who had been prospecting the course at racing speed and throwing the inhabitants in such a state of panic that the government had to interfere. If this be the case the responsible parties should have alone been made to suffer, and it is manifestly very unfair to throw the burden of their recklessness on to the whole automobile industry.







Published Every Thursday
By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING.

154 Namau Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Leaden Office, 53 Fleet Street, Paris Office, 2 Rue d'Abbeville,	:	:	C. V R. F	V. BROWN. COLLINS.
Subscription, Per Annum [Postage				
Single Copies [Postage Paid] .				
Foreign Subscription				. \$3.00

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor-vehicles will find the technics and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N. Y. Post Office, November, 1900.

NEW YORK, MAY 1, 1902.

Enforcement of Speed Regulations.

It is easy to be wise after the event; easy to triumphantly ejaculate, "I told you so!"

Consequently the leaves in Vallombrosa were not so very much more numerous than are the people who are able to put their fingers on a dozen things, each one of which was the cause of all the trouble with the endurance run of the Long Island Automobile Club on Saturday last.

The altogether unexpected bigness of the run should be taken into account by these and other critics. To it was due many of the minor happenings which marred the contest and prevented its having that clocklike regularity and perfect smoothness that are characteristic of ideal functions.

Excessive speeding and defective observing stand out sharply from the runk of little shortcomings or oversights inseparable from most affairs of the kind.

The latter is treated elsewhere. The former has been talked about until it almost seems as if there is nothing left to be said concerning it. It has been treated from every viewpoint. Every phase has been touched upon. Interested and disinterested persons have freed their minds concerning it.

It only remains necessary, therefore, to make a brief summing up.

No operator or observer who studied the rules or made an adequate effort to obtain information regarding the speed limitations went to the starting line in ignorance of them. Furthermore, the majority of the operators of the speeding vehicles unhesitatingly avowed that speed records weighed more with them than ribbons—blue or otherwise.

In view of the fact that all this did not prevent excessive speeding, it is apparent that something more is necessary in future contests

It should be brought home to every entrant and every starter that punishment certain and swift will be inflicted on all violators of speed regulations. The entry blanks, the rules, the printed instructions given out on the morning of the contest—all should emphasize this fact; and to cap matters, every operator and every observer should be notified verbally of this and obliged to make an acknowledgment of the notification.

If, in spite of all this, violations are still made, adequate punishment should be inflicted. Mere disqualification is puerile. The loss should be proportioned to the expected gain—which is usually, of course, looked for in advertising.

In the present state of the public mind nothing but drastic action of this kind will avail.

We are skating on very thin ice. It is not enough to protest that the overwhelming majority of us are law abiding and utterly opposed to illegal speeding. We must make an example of offenders whenever an opportunity arises.

More Facts for the Frenzied.

To reiterate in part what we stated last week, if fact and not frenzy dominated the thoughts, actions and utterances of the autophobes, facts like these would convey their own moral:

In this city one day last week a small boy endeavored to pass immediately in front of a moving automobile. He was run down and his leg broken, the big vehicle being stopped after the front wheel had passed over the young unfortunate. The newspapers devoted from one to two columns to the occurrence, making it in nearly every case affirst page story.

On Tuesday an ice wagon ran over and,

crushed out the life of a small boy. The driver escaped. To this tragic event the newspapers devoted from ten to fifteen lines, with small headings, and in inconspicuous columns of the papers. On the same day a soda water wagon also claimed a youngster for its victim. The fact was summed up in from six to ten lines.

On Wednesday a Broadway cable car ran over and horribly mutilated a girl of seven; it required the amputation of both legs. This also was dismissed in less than a dozen lines.

While the newspaper treatments of these respective accidents and fatalities speak for themselves, and serve to show why it is that the public has been lashed into a frenzy by unduly lurid reports of automobile speed and automobile accidents, it will also serve to convey to the man whose head is unheated a suggestion of what would have happened had an automobile been responsible for two killings in one day, and had its operator attempted to escape. It is probable that the "yellow" journals—and some that are not yellow—which have played on the fears of the people would have demanded indignation meetings, if not lynchings.

Perfect Observers and How to Find Them.

Obstacles, said a great Frenchman, are made but to be overcome. The greater they are the more glory there is in overcoming them.

It must be confessed that the problem of providing proper observers for automobile contests is a most difficult one. There are so many things to be considered. The qualities demanded are many and diverse and anything but easy to always find in one man.

"It requires no great wisdom to perceive that the more important rule is that relating to the duties of the observers," we remarked a month before the contest took place. "That, and the choice of these highly important persons, really form the crux of the matter. They are autocrats. According to whether they be competent or incompetent, honest or dishonest, the contestants will be judged justly or unjustly. Their reports may well be likened to a mirror, upon the placid surface of which the gazer will find reflected a complete and absolutely impartial history of the vehicles' runs."

The ideal observer must be an inflexible judge, notwithstanding his environments are such as to make of him an advocate and well wisher of the operator he observes. He must be competent, quick witted, incorruptible; the last whether corruption is sought to be practised under the guise of good fellowship or the infinitely more vulgar greas-

ing of palms. He must be proof against fooling himself or being fooled.

It will hardly be disputed that such mena hundred or more of them—are not easy to find; or found to impress into service.

The events of Saturday bring out clearly the importance of the observers, at the same time that they emphasize the difficulty of obtaining them.

In justice to the Long Island Club it should be said that efforts were made to provide observers of the class desired. Had they not done so matters would have gone badly, and as it was no small proportions of inexperienced, incompetent or prejudiced observers were among those who served.

Another contest is soon to be held. It bids fair to surpass the one which has just passed into history, and to attract even more attention. It is known that the committee in charge is giving the matter of the observing especial attention, recognizing the monumental nature of the task before them.

A careful selection of the men, rendering, it obligatory upon them to read the rules and be able to pass an examination on their duties, would go far to overcome the obstacle, great as it is, standing in the way of obtaining perfect service.

When the Sprag Failed.

We have often wondered whether the sprags fitted to most foreign motor vehicles and to a few of American manufacture are equal to the task assigned them in cases of emergency.

A sprag, be it stated for the benefit of those who are not familiar with its appearance or duties, is simply an iron or steel bar, having a pointed end, attached to the frame of the vehicle and designed to be let down so that the sharp point will dig into the ground and prevent the vehicle's running back. If the engine fails and the brakes will not hold, the sprag is the court of last resort.

Quite recently our curiosity on the subject was gratified. Upon nearing the top of a fairly long and steep hill in a heavy car, a gasolene vehicle, a chain link snapped and the automobile came to a sudden stop. The chauffeur was a little slow in releasing the cord that held the sprag clear of the ground, and the vehicle had begun to run down the hill before it caught.

. There was a crunching sound and a violent jolt, an instant of hesitation, and then the car went on again, getting faster and faster. As it was afterward found, the iron bar had given way under the strain and bent back so far that it no longer touched the ground. The brake was the only thing left to retard the speed, but it, alas! acted only when the vehicle was going forward, and so was useless in this case. There was nothing to do, therefore, but to run down the hill backward, trusting to good fortune and skilful steering to avert disaster.

As it happened, such was the outcome, although it was rather a close call in the matter of reaching the next rise and coming to a stop before encountering an opposing vehicle.

The incident made an impression even on the owner of the vehicle, who had become habituated to "taking chances." In all probability he will have a double acting brake fitted, before he does much more hill climbing.

It is a pretty safe assertion that there are plenty of vehicles in use which are liable to similar mishaps.

Long immunity from accidents hardens a man to a shortcoming of this sort. He is favored by fortune, or his skill and resourcefulness pull him out of tight places; and he banks on a continuance of his luck.

But the time is certain to come, whether it be soon or late, when everything—luck, skill, etc.—fails him.

He either meets with a bad accident or he has such a narrow escape from one that he is startled out of his indifference and resolves to do at last what he snould have seen to at first—the equipping of his vehicle with the means for controlling it under any circumstances.

On a Percentage Basis.

Viewed as a test of motor vehicles—and American motor vehicles in particular—the Endurance Run of the Long Island Automobile Club on Saturday was a gratifying success.

The conditions under which the contest was run were not at all severe, either as regards the distance, the roads traversed or the weather conditions. For this reason a good showing was confidently expected, and it would have been a great disappointment had it not been made.

Even the cursory survey possible with the figures now obtainable reveals some surprises.

For example, there were sixty-six starters, thirty-seven of which were given awards—56 per cent. But if from the number of starters is deducted the disqualified ones, twelve in all—all of whom would have been

among the ribbon winners—the percentage would be increased to 68.

Of the awards, no less than twenty-one were blue ribbons, this meaning that the winner made a perfect record.

Turning to the percentage table again, twenty-one blue ribbons out of sixty-six starters gives 32 per cent. Deducting the twelve disqualified ones again, the percentage is increased to 39 per cent. Or, to take it another way, add the ten disqualified vehicles which went through without a stop to the number of blue ribbon winners and the percentage of these to starters is 47 per cent—a really remarkable showing.

When it is remembered that of the sixtysix started, a not inconsiderable proportion were experiments in poor condition or in incompetent hands, the gratifying nature of the result becomes more apparent.

It is noteworthy also that of the award winners more than one-half—twenty-one out of thirty-seven—received the coveted blue ribbon.

Of the thirty-seven award winners eleven were steam vehicles and twenty-six gasolene. All but four of the thirty-seven were of American manufacture.

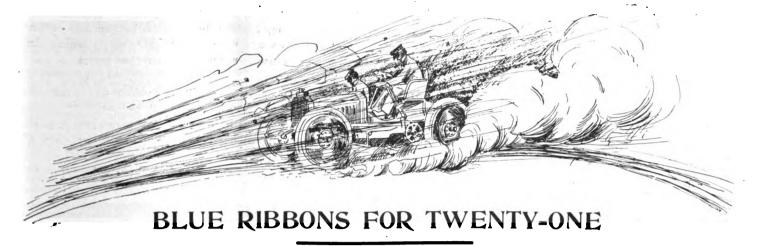
So rapidly are automobiles increasing in number that nearly every storage warehouse in this city is full of them. It is now reported that the St. Nicholas Skating Rink is to be turned into an automobile station. Recently the legal representative of these storage houses spoke in favor of the ordinance increasing the legal rate of speed of automobiles, stating that his clients were vitally interested in the matter and favored the fixing of a reasonable limit.

There is a slight difference between topnotch prices of automobiles in this and across-the-water countries. The new racing Serpollet steam car which made such a wonderful kilometer run a few weeks ago was sold to an Englishman, who said that price made no difference to him, for \$11,000. This is said to be the highest price ever paid in France for a 12 horsepower car.

With the King and Queen setting the example and the nobility following in their footsteps, it is not remarkable that the British Premier should take to automobiling, too. Consequently the announcement that the Marquis of Salisbury is a "motist" is timely.

Now it is The Highwayman that bears off the nomenclature palm. This oddly named automobile, however, is a passenger 'bus.





Ten Others Would Have Received Them But Violated Speed Regulations and Were Disqualified—Remarkable Results of Long Island A. C's., Second Annual Test—
Run in a Wind Storm, With Sixty-six Starters.

THE BLUE RIBBON WINNERS.

No.	Make.	H.P.	pass'gers.	power.	No.	Make.	H.P.	Pass'gers.	Power.
5—′	Toledo	7½	2	Steam.	41—ŀ	Knickerbock	er 5	4	Gasoline.
6—'	Toledo	7½	2	Steam.	42—I	Knickerbock	er 5	4	Gasoline.
8—	Pierce	31/2	2	Gasoline.	45F	Iaynes-App	son. 9	2	Gasoline.
13-	Panhard	16	4	Gasoline.	46—E	Iaynes-App	'son. 9	2	Gasoline.
15-	Lane	9	4	Steam.	47—A	utocar	—	2	Gasoline.
24—	White	6	2	Steam.	56-V	Vinton	15	4	Gasoline.
25—	White	6	2	Steam.	57—V	Vinton	8	2	Gasoline
29-	Packard	12	2	Gasoline.	60—F	eugeot	12 .	2	Gasoline
30-	Packard	12	2	Gasoline.	72 —0	oldsmobile .	4	2 .	Gasoline.
33—	Century	8	2	Steam.	74—F	RochSchne	ider.16	. 4	Gasoline.
	Elmore		4	Gasoline.		(All Ti	mes Officiall	ly Withheld.)	

HILL-CLIMBING AWARDS.

Class A.
For steam vehicles, all weights and powers.
J. M. Page (Locomobile)Time 1:42
Class C.
Gasoline machines, under 1,000 pounds.
W. J. Stewart (Autocar)Time, 2:30
Class D.
Gasoline machines, between 1,000 and 2,000
pounds.
Percy Owen (Winton)Time 1:42
Class E.
(Insoling machines over 9000 nounds

Gasoline machines, over 2,000 pounds. Oliver Jones (Rochet-Schneider)...Time 1:19 (Also winner of cup for fastest time).

(Results of Gasolene Consumption Test Not Yet Compiled or Decided,)

Some one likened the Long Island endurance test to a run across a desert during a sandstorm, and it is fair to say that the simile is not wholly far fetched.

Of course, the serpentine course of 100 miles which the good fellows of the Long Island Automobile Club laid out for the event of Saturday last was anything but desertlike. It wound uphill and down, and in and about thrifty villages, palatial country villas, fertile farms, and all that sort of things, but there was aplenty of stones and gravel on the roads, and with the wind blowing like a whole battle field of great guns, and small ones, too, stones and gravel filled the air and eyes, noses and everything else, and removed the run from anything like relationship to a glorious dream of bliss.

It was what the slangishly inclined would probably describe as a "fierce" day. In New York torrential rains had fallen during the night. On Long Island only an infantile sprinkle had descended, and dust was the participants' portion.

The start and the scenes and incidents at-

tending the start from Jamaica's historic 150-year-old hostelry, Pettit's Hotel, was not unlike the start of all other events of the sort. The vehicles were dispatched at 30-second intervals, the first one getting away at about 9:30 a. m.

The finish at the same place, and what followed the finish, was contrary to anticipations. According to official calculations, based on regard for the speed laws, no contestant was expected to complete the 100 miles inside 6 hours and 40 minutes, an average of 15 miles per hour. When, therefore, Charles D. Cooke, in a 16 h. p. Darracq, dashed into the hotel yard and his time proved to be 4 hours and 28 minutes, the officials looked uneasy. When J. G. Lyman's big red Panhard came in in 4 hours and 2 minutes-it had started after Cooke's Darracq—and was followed by a De Dion, two more Darracqs, three Fournier-Searchmonts and a Knox, all away inside the legal and official limit, it became evident that many had thrown blue ribbons to the dogs and made a scorch of it. When these were followed by a Locomobile, two United States Long Dstance cars and one Ward-Leonard, the quiet exclamation of Clerk of Course Webb, "Disqualified!" had lost novelty and demonstrated that the Long Island Club meant to assert itself. It has since emphasized its position by practically ignoring the offending contestants, heaping odium upon them by ranking them with the "also rans."

There were, and still may be, mutterings against the club's action, but it is simple justice to say that each succeeding day has but served to strengthen its position. It is being made plain that it is the better part of wisdom on the part of the disqualified ones to "sing small."

In one respect, however, the disqualifications are unfortunate. Impressive as it is, they rob the table of blue ribbon winners of names that deserve to be there and that would be there, and thus make it the more imphessive had discretion got the upper hand of valor. Of the twelve disqualified vehicles ten went through with out stops of any



kind, and one had only a non-penalized stop
—a puncture—charged against it.

If the event turned up any sensation it certainly was in the perforamnes of those sensational vehicles, the White steam carriages. Other steamers earned 100 per cent and completed the 100 miles without replenishing their gasoline supply, but so far as known all except the Whites took advantage of the non-penalized stops for water. Two of the Whites went through without a stop or skip of any kind, the third stopped only because the terrific wind that prevailed twice extinguished its pilot light, and this one was operated by the head of the White establish-

Whites, which also supplied the sensation of the memorable New York-Buffalo test, the other vehicles that were conspicuous in that event were likewise conspicuous in last Saturday's run. The Haynes-Appersons, the Packards, the Lane and the Autocar, all added to their glory, the third Haynes-Apperson having its only stop and demerit scored against it when within sight of the goal. It ran out of gasoline one mile from the finish.

The Winton, which ran into a peck of trouble on the Buffalo run, more than made up for those shortcomings, and placed two blue ribbons to its credit. The same is true of foreign make, three of them being Darracqs. The most notable exception to the generally creditable performance of the imported vehicles was the kerosene burning Serpollet steam car. It was in trouble almost from the very start, and before its operator "chucked" it every part of it was practically taken out and cleaned, or in some way tinkered with. The vehicle was a thirsty one, and consumed unlimited quantities of water, and at that seemed unable to make the most of its steam. It is only fair to say, however, that not a little of the fault is claimed to have been due to the inexperience or incompetence of the operator.

While the test was one of machines rather than men, the operators also were put on their mettle. It was a day to try men's

THE OFFICIAL AWARDS IN FULL.

STEAM.

			No. of		Total			Time
No	. Make of vehicle.	Н. Р.	passengers.	No. stops.	time stops.	Awards.	Per cent.	on hill.
210					h. m. s.			m. s.
1	Prescott Auto. Mfg. Co	. 41/2	2	1	0:00:30	Red.	99	1:59
$\tilde{2}$	Prescott Auto. Mfg. Co	. 41/2	2	5	1:25:00	H. C.	83	2:40
15	Lane Motor Vehicle Co		4	0	0:00:00	Blue.	100	2:34
24	White Sewing Machine Co		2	0	0:00:00	Blue.	100	2:06
$\frac{1}{25}$	White Sewing Machine Co	. 6	2	0	0:00:00	Blue.	100	2:20
26	White Sewing Machine Co	. 6	2	2	0:02:30	Red.	99	2:08
33	Century Motor Vehicle Co	. 8	2	0	0:00:00	Blue.	100	2:07
53	Locomobile Co. of America	. 31/2	2	. 3	0:16:00	Yellow.	· 96	1:42
54	Grout Bros	. 4	2	9	1:03:30	V. H. C.	87	2:06
5	International Motor Car Co		2	· 0	0:00:00	Blue.	100	11:46
			GAS	OLENE.				
	T. L. martinari Matan Can Co.	71/.	2	0	0:00:00	Blue.	100	2:10
6	International Motor Car Co	• 172 21/	$\bar{2}$	· ŏ	0:00:00	Blue.	100	6:42
- 8	George N. Plerce Co	16	-,	1 .	0:00:35	Red.	99	4:04
11	Peerless Mfg. Co	14:	.1	0	0:00:00	Blue.	100	7:22
13	Panhard-Levassor	7	$\frac{\pi}{3}$	š	0:21:00	Yellow.	95	3:42
18	Automobile Co. of America		3	. .	0:17:00	Yellow.	96	6:46
21	Automobile Co. of America	10	3	1	0:10:00	Red.	98.	2:08
23	Panhard-Levassor	10	2	$\frac{1}{2}$	0:15:00	Yellow.	97	
27	Torbensen Gear ,Ltd	1.)	5	õ	0:00:00	Blue.	100	10:42
30	Ohio Automobile Co	10	$ ilde{2}$	$\frac{9}{2}$	0:00:00	Yellow.	97	2:03 4:52
35	Peerless Mfg. Co	. 10	$\frac{1}{2}$	ō	0:00:00	Blue.	100	
38	Elmore Mfg. Co	. 5	$\frac{1}{2}$	ő	0:00:00	Blue.	100	3:57
41	Ward-Leonard Electric Co	. 3	4	0	0:00:00	Blue.	100	3:35
42	Ward-Leonard Electric Co	(17	9	$\frac{9}{2}$	0:13:30	Yellow.	97	5:03
43	Ward-Leonard Electric Co	. 01/2	$\frac{2}{2}$	õ	0:00:00	Blue.	100	5:36
45	Haynes-Apperson Co	. 9	$\frac{2}{2}$	ő	0:00:00	Blue.	100	2:33
46	Haynes-Apperson Co	. 0		ŏ	0:00:00	Blue.		4:45
47	Autocar Co	19	2	ő	0:00:00	Blue.	100	2:30
60	Peugeot & Cie	12	$\frac{z}{2}$	4	0:31:30	White.	100	1:46
63	Haynes-Apperson Co	9	2	5	0:40:30	White.	93	4:19
70	United States Long Distance Auto Co	. (2	0	0:00:00		91	3:38
72	Olds Motor Works	. 4	2	0	0:00:00	Blue.	100	4:16
29	Ohio Automobile Co	12	2	•		Blue.	100	2:06
56	Winton Motor Carriage Co	15	4	0	00:00:0	Blue.	100	1:42
57	Winton Motor Carriage Co	. 8	2	0	0:00:00	Blue.	100	2:59
68	Wheel-Within-Wheel Co	. 9	3	3	0:08:10	Red.	96	4:14
74	Rochet-Schneider	16	4	0	0:00:00	Blue.	100	1:19
79	Automobile Co. of America	. 9	2	5	1:10:00	V. H. C.	86	3:05

ment, Windsor T. White. All three of the vehicles were equipped with the new condenser, which some one dubbed an "apron," and finished with their boilers more than half full. Mr. White, usually calm and undemonstrative, was as happy as man can be, and lifted the lid of the boiler and showed its contents with as much pride as a boy would show his red topped boots.

"We had to loaf for the last hour and a half to avoid getting in ahead of time," he laughingly confessed.

The three carriages arrived together, in exactly 6 hours and 41 minutes, their even performance throughout and in the hill climbing contest adding interest to their remarkable run.

It is a notable circumstance that with the

of the Toledos and the Century steamer, which latter, by the way, was the first of a new model to be produced. The Ward-Leonards, which, although made by an electric company, are gasoline cars, and which failed ingloriously on the mud plug to Buffalo, retrieved their good name in convincing fashion.

Of the new reputations made none was more fairly earned than that of the little 5 h. p. Elmore. Without being pyrotechnical, its performance was splendidly consistest from start to finish. It stopped for nothing and never wavered.

The foreign cars, as usual, gave a good account of themselves, but they suffered greatly by the disqualification process. Five of the twelve which were disqualified were

souls. The wind was simply tremendous. It seemed to blow from no particular direction. and amid the hills of the north shore of the island it was cold and penetrating. It whirled huge clouds of dust, sand and small stones in the men's faces, and at times attained such force as to apparently retard the speed of the lighter vehicles. Such conditions naturally gave the operators of the steam vehicles no little concern. Their fires were alternately high and low, and required constant watching. On a number of occasions they were extinguished, and this cause accounted for quite a few of the demerits charged against them. There are stories of operators avoiding these demerits by jumping out of their vehicles while the wheels still turned and relighting their burners while running alongside the carriage. Others are said to have climbed out on the running gear, sailor fashion, and relighted from all sorts of positions.



UP ROSLYN HILL

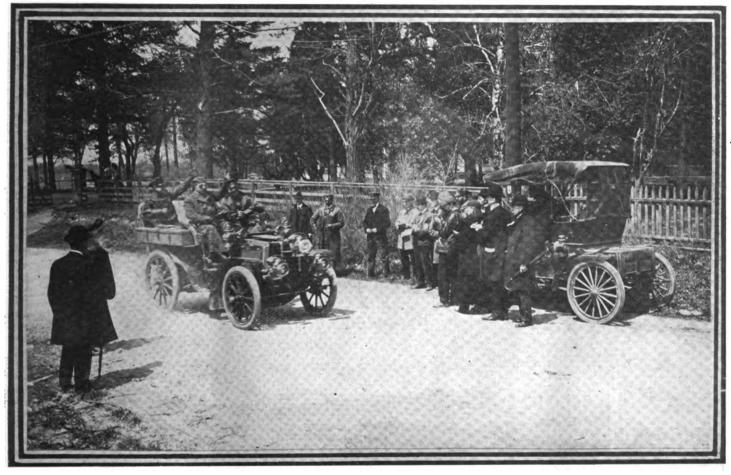
How the Cars Made the Climb—Some Crawled, Others Raced Up It.

Only once were the restrictions on speed waived. That was during the hill climbing contest up Roslyn Hill. There each operator was given a free hand and permitted to ascend just as fast as his vehicle would carry him. As a result some exceedingly fast performances were made.

No spectacular interest attached to this

Figures bring out both of these points. The length is 2,800 feet, the maximum grade 8 per cent. The surface on Saturday was fairly go d, a sort of red gravel, windswept and undulating. Only a few vehicles had trouble in ascending it. The extremes are shown by the fastest and slowest times—1.19 and 11.46, respectively. The remarkable evenness of the running is shown by the fact that fourteen vehicles climbed the hill in between two and three minutes. The steam vehicles in particular did well. Of the eleven award winners in this class there was only one which took more than 2 minutes and 40 seconds to make the ascent.

2 -Prescott 41/2	2	2:40
5—Toledo	2	11:46
74-Rochet-Schneider16	4	1:19
56-Winton	4	1:42
60—Peugeot12	2	1:46
30-Packard12	2	
29Packard12	2	2:06
23—Panhard	4	2:08
47-Autocar	2	2:30
45—Haynes-Apperson 9	$ar{2}$	2:33
57—Winton 8	• 2	2:59
79—Gasmobile 9	2	3:05
41-Ward-Leonard 5	2	3:35
70-U. S. Long Distance 7	2	3:38
18—Gasmobile 7	3	3:42
38—Elmore 5	2	3:57
11—Peerless	2	4:04
68—Wheel Within Wheel Co. 9	3	4:14



AT THE TOP OF ROSLYN HILL

sub-contest. Indeed, it was tameness personified, so much so that many of the occupants of the vehicles scarcely knew they were in a contest until they reached the finish line.

Two officials were stationed at the starting point and about a dozen persons had gathered near the finishing line. There was little to indicate the former, and only those who were watching for it—and not all of them—saw it in time to get their vehicles ready and work up speed. Caught at a disadvantage this way, many of them were unable to make as good a showing as they would otherwise have done. The lucky ones of this class had decidedly the best of it. They chose their time and made the journey under the most favorable circumstances.

The hill is long, but not excessively steep.

No startling incidents are to be noted. Some of the vehicles, notably the Rochet-Schneider, winner of two cups, went up very fast, but the course was comparatively clear, and there were no really bad places in it. Therefore, the sensational occurrences which marked the Nelson Hill climb last autumn were not repeated.

The times of all the vehicles which won ribbons or other awards follow:

		NO.	ırme
No. Name of Vehicle.	HP.	Pass.	M.S.
53—Locomobile	$3\frac{1}{2}$	2	1:42
1—Prescott	$4\frac{1}{2}$	2	1:59
24—White	6	2	2:06
54—Grout		2	-2:06
33—Century	. 8	2	2:07
26—White	. 6	2	2:08
6—Toledo	$.7\frac{1}{2}$	•2	-2:10
25-White	6	2	2:20
15-Lane	. 9	4	2:34

72—Oldsmobile 4	.,	4:16
63—Haynes-Apperson 9	2	4:19
46-Haynes-Apperson 6	2	4.45
35-Peerless16	2	4:52
42-Ward-Leonard 5	4	5:03
43Ward-Leonard 61/2	2	5:36
8-Pierce 3½	2	6:42
21-Gasmobile 9	3	6:46
13—Panhard 16	4	7:22
27-Torbensen Gear, Ltd 5	2	10:42

Data regarding the consumption tests will not be given out until next week. The committee hoped to have the figures ready for publication to-day (Thursday), but inability to obtain the report of one of the judges prevented this being done.

It is reported that the Hungarian postal authorities are about to conduct a series of experiments with motor vehicles

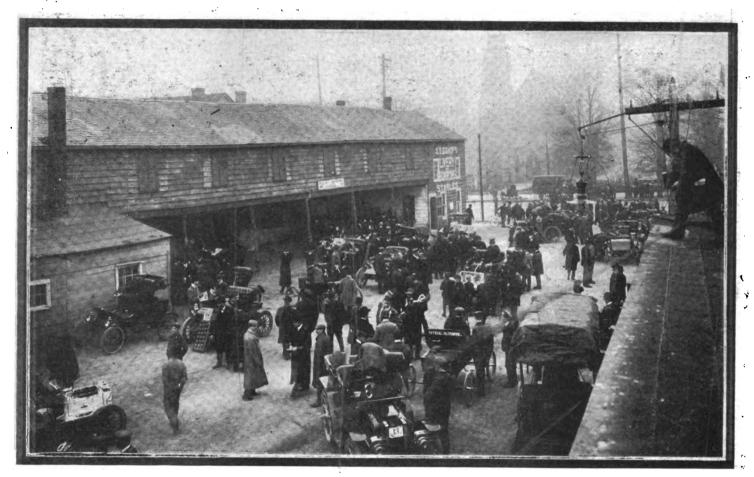
→Bird's-Eye Views by an Unofficial Observer→

The Long Island Hundred was an altogether huge and all-day-long affair, an event of ten hundred incidents, a conglomerate of comedy, tragedy, of elation, depression, reward and disqualification. It was an affair of weather, April, feminine, capricious and at her worst, April making a last stand, the April of mist and fog, and hurtling dust shrouds.

sive—yea, considering the rules of the contest, for extraordinary—speed, while the percentage tables, not completed at this moment, will entirely shut out last year's awards from any comparison with this year's results.

Elsewhere in this paper learned men will sum up the practical result of Saturday's event. At least, they will partially sum it up; but the full import of the run and the all sorts and conditions of people, in whom the dominant note, plainly stamped on clothes and features, was "Contest." All finally gathered about Petit's Hotel, a shambling white weoden building, in the main street, but rejoicing in the possession of a great straggling yard, a yard opening gently into the street.

The sight in this place at 9 o'clock beggars description. Automobiles everywhere; cars



SCENE FROM THE ROOF OF PETTIT'S HOTEL AT THE START.

The Long Island Hundred was fruitful in incident, was a red letter day for automobiling, a day of complete satisfaction to many of the contestants, and of much gratification to the automobile manufacturers. For the former achieved honors galore, while the latter were highly gratified over the greatly improved showing made by their product.

Last year there were twenty-two entries, fifteen starters and ten covering the course, five going to the devil or elsewhere. This year, eighty-two entries, of which fifty-three came to the finish all right and sound. Last year two vehicles received 100 per cent, one 90 per cent, two 98 per cent, one 97 per cent, one 96 per cent and one 97 per cent. Two were disqualified for "excessive speed." This year twelve were disqualified for excessions.

history it made, the new light it shed on this sort of contest—all this will require weeks of debate and digestion before final wise conclusions may be arrived at.

Meanwhile, to mirror the event, to sketch its salient features, to body it forth so that those who were not there may get some idea of the day's doings—that were no easy task, a task not to be adequately discharged in a newspaper sketch, but rather best done in a book.

Some, indeed many, of the men put up at Jamaica overnight, and there was much yarning and spinning of the lore and romance of automobiling. In the morning, at 9, in Jamaica, near Jamaica, heading for Jamaica—Jamaica, the Mecca—were automobiles of all sizes and descriptions, manned by

or all kinds; cars doing all kinds of things and having all kinds of things done to them. There were sixty-five different noises. A fire in a menagerie might produce a similar result as to the ear, and a conflagration in a great automobile storehouse might produce a similar result as to the eye. No such gathering of automobiles ever was in this country—eighty-two for the contest alone, with a half score more representing the visiting Automobile Club of America delegation, and another score or two more for officials, pressmen, tradesmen and private leisurely observers.

It was confusion worst confounded. The yard, the main street and the neighborhood of the hotel were simply packed with cars, crews, sightseers and officials. The cluest

inhabitant, leaning tremulously on a cane, was there. So also was the village small boy, open-mouthed; the unbelieving townsdame, the crowd of the ne'er-do-well, the regular mob of the time burners to be found at any public function. Then, there were policemen, negro stablemen, farmers and sundry other types of hangers on.

And then the insiders! First an army of pressmen, yes, a veritable army. Men from dailies and weeklies, men from the automobile papers and the magazines, and each supported by one, two or seven photographers. It is highly probable that a thousand plates were spent on Saturday. More insiders—the drivers, the eighty-two observers, the passengers, operators, tinkers, mechanical experts, mere cleaners, tiremen, oilmen, bodyguards, third assistant grooms and all the rest of them.

Clothes! Clothing! Sartorial equipment! Well, everything that has ever been used to clothe an automobilist was represented, and there were even a few kinks to boot. Of course, everybody wore some kind of cap, and, of course, the oilskin and rubbered coat was the simplest rig and the most frequently seen. And all the clothes worn were based on the downpour which swept Long Island and its neighborhood at 6 o'clock in the morning. All the signs pointed to a drenching day, and the sons of men guided themselves accordingly. So the men who went through the run were accoutred like deep sea divers; or whalers, or fire fighters, or sallor Norsemen, or begrimed navvies-all according to your fancy and imagination.

At 9:30, or thereabouts, the undaunted F. G. Webb, clerk of the course, surrounded by a corps of checkers, timers, observers, judges and the like, set the play in motion. The machines were not started in numerical sequence. Two or three were gotten into line and sent off. Men rustled around the yard, got the cars out on the asphalted main street, and in some sort of fashion they were sent away. Later on the loiterers, feeling that they might be left, got themselves into line, the cars were sent off in bunches, and by 10 o'clock the hotel yard was deserted, and some seventy odd machines were shooting through the dust over the Long Island roads. The start was not inefficient, but it was haphazard, non-spectacular and devoid of that nice and precise officialism which so helps an affair of this kind.

The course was one of sinuous perplexity. Each contestant carried a waterproof cardboard map, and there were signs galore. And all of this guidance was needed. The course was laid out with the greatest care by men who know and love the Island. It was designed to include hill and level; much thought was spent on its selection, and the result was presumed to be ideal. Yet the general opinion was that a fifty mile run, out-and-back, a plain, simple, non-contortional stretch, would have more satisfactorily filted the bill. There is no room here to discuss this minor point, nor were any warm words wasted over the matter, but the outand-back idea was general opinion. The

course was remarkable for beauty and variety, and also for isolation. It was smooth-roaded; it ran by farm and through village, uphill and downhill; at places it wound through the hills; it uncovered a thousand pictures of rural life—the bread acred truck farm, the stately country house, the great barns of agriculural prosperity, churches by the score, schools by the dozen, a fair-ground, a cathedral, a shooting park, a race-track a hospital—all this slipped past kaleid-oscopically.

The course was supposed to be overstrenuous, and parts of it were, but there were no very great steeps. They might have been so considered in the earlier days of automobiling, but to the cars of to-day the hills were mere flea bites. In fact, Roslyn Hill itself, on which the contest was decided, showed only 8 per cent, and many of the competitors considered it a mere knob or pimple. Of the seventy odd machines that climbed it, only one came to the top zigzagging its way.

Through the courtesy of the Long Island Railroad, and probably through the influence of the great hearted Fullerton, a private car was placed at the disposal of the pressmen. This was an experience to be remembered. It is probable that no other part of this country could furnish so unique a service. As is well known, the Long Island Railroad and its tentacles completely honeycomb the Island, so this train, leaving Jamaica at 10, rushed the pressmen to Roslyn Hill (22% miles). After all the machines had passed they were transported to Hempstead (16%) miles), and after a two hours' stop there they were taken back to Jamaica. It was altogether a very smooth performance.

According to the condition of the run, not a machine was expected back until 4:14 o'clock.

The officials at the finish, the checkers and the crowd generally had disposed themselves about the hotel, and were killing time in various ways. Suddenly there was a line and cry, a shout of astonishment. Car No. 3 rushed into sight, flashed past the timers and checkers, and finished triumphantly in the hotel yard. It was at first supposed that this competitor had lost the course, or cut it out, or had retired a beaten proposition. But in a moment it dawned upon the watchers that the conditions had been thrown to the winds; that Car No. 3 had gone over the course at its own sweet will; that it had covered the hundred in 4 hours and 28 minutes-and that it was disqualified.

In a few moments more another runaway hove into sight, and the Lyman Panhard crossed the line in 4 hours, 2 minutes and 30 seconds. And so they came rushing home, all flushed with triumph, all far under the allotted time, all disqualified. Twelve cars met this fate. Of the 12 who "beat the record" and thus achieved disqualification, those who wanted the blue ribbons set up a subdued howl. But among the 12 were some who simply wanted a "record," a "first place," and those who achieved speed honors were suffused with the glow of the victor. In fact,

it appeared that the run had resolved itself into a fast and into a slow brigade, and among the leaders it became neither more nor less than a race. The officials were vexed.

After the first ten outlaws came home and were ignored by the timers (not so by the crowd, however), the affair settled down to one of steady arrival, until forty-two cars had returned within the prescribed time. The majority of them had gone the hundred without a scratch. Of course, machines and operators and passengers were covered with dust. They looked as if they had gone through a battle in which anything but smokeless powder had been used.

It was interesting to watch the arrivals. There were two classes—the leisurely private owner with his pet car, and the manufacturer with his latest leading type. The private owner, wearied, begrimed, bedevilled from head to foot, his car completely bedraggled, came over the mark with a smile of triumph, to fall into the hands of his rejoicing friends. The trademan, with two or three machines in the blue ribbon class, was victoriously self-contained. He moved here and there and everywhere, chortling, chuckling and whispering words of congratulation to his people. It was as if a great battle had been won. The enthusiasm was remarkable. It is this enthusiasm which will make automobiling great, which will spread it from ocean to ocean,

. And so the cars came in up to almost nightfall. The hotel yard again became packed-the hotel bar was lined three deep. Newspaper men were moving here and there in the pursuit of "copy." The officials put their heads together; there was much talk of qualification and disqualification. A hundred tongues were busy with the various merits and demerits of the cars as shown by the day's run. Then night came on. The officials took their voluminous papers away. The camera men folded their machines and stole home. The pressmen headed for Gotham. And slowly, and by easy stages, Pettit's Hotel and Jamaica resumed their usual quiet.

Why Data is Being Withheld.

All information relating to the character of the stops made and to the elapsed times of the winners of awards is being withheld by the committee.

"A tabulated statement of the stops, their character, etc., is being prepared," said Chairman Pardington to The Motor World representative to-day, "but it will not be ready until next week. You see, this is rather a complicated matter, and a task requiring considerable time. The table when completed will state the number of stops made by each vehicle, and, in addition, whether each stop was for fuel or water, ignition troable or other cause—in fact, exactly why it was made.

"As to the time taken by the winners to cover the course," he continued, "we deem it best to reserve that also for the present. Eventually it will all be made public, but not now."



WITH A 100-PER CENTER

How the Only Elmore Covered the Course Without Hitch, Skip or Stop.

Those who have ever been to a church fair and have taken a "chance" on a blue quilt or a pink tidy, and then waited around for the drawing, can well picture the scene in the committee room at the start when the observers were drawing numbers for their cars. It was my fortune to draw the only Elmore which was entered. And good fortune proved to be my lot. I rode in a "Blue Ribbon Winner." Two of my friends drew to high-powered vehicles, and with a cavernous smile promised to greet me at the route when things went wrong. He got back somehow. Further, deponent saith not.

The other, in addition to commiserating with me, congratulated himself inasmuch as his prize represented a tamous foreign made steam vehicle. His particular gladness was based on the point that he would have a good chance to study the working of the affair. Starting shortly afer we did, the subject for study passed us about a mile and a hair out. At two miles and a little over the first study was entered into, and from here on, according to all accounts, the studies were oft and repeated. How much "understudying" was done no one has found out, for if there were any traces of the road surface on the occupants' backs it had been re-The vehicle cut the course near Hicksville and returned to Jamaica direct, getting in about two hours after I did.

After passing the foreign novelty we were alone until reaching the turn at Flushing, where a number of the fast brigade passed us at a speed that did not argue well for careful timing in making controls. From here on riding was without feature for some distance, nobody was passed and we passed nobody, until reaching an upgrade just before running into Little Neck. On this grade and up the hill and by us at twelve miles an hour went two powerful French cars. Any chagrin that we might naturally feel was more than offset by our passing two small vehicles that were anchored, in comparison to our speed and that of the big passersby.

Another long streth was next ridden, with nothing to indicate "there were others," the time being divided, on my part, between watching the scenery and holding lap robes and other impedimenta from being blown over into Connecticut. The word divided is used for lack of a better. As a matter of fact, scenery came in for mighty little attention from me, the lap robe and routebook so flirting with the wind that a firm hand was required to keep them within modest bounds.

Two more big machines passed, and again for a few more miles the ride semed merely to be a pleasure jaunt. A little anticipatory excitement was furnished when the long, winding and steep downhill was reached near Manhasset, and a mutual discussion took place as to what would take place should the brake refuse to hold. Before the discussion was fairly finished the foot of the hill was reached.

Winding along the shore of Manhasset Bay, the calm and peacefulness of our even going was suddenly broken into by the frantic waving of a whip and the loud ululations of a coachman driving the team of a summer resident. The excitement was all on the part of the driver, the horses paying little or no heed to anything but their regular work of smartly logging along.

The curtain of lonesomeness again descended, and protection from the wind offered full opportunity for me to note the calm and even throb of the two-cylinder motor at work below us. Not a hitch in its running, just a little hiss from the exhaust to keep the ear atuned. Then came the long, heavy downgrade into Roslyn, taken with the caution warned of in the official programme.

A superior and passing glance was here



LOCOMOBILE THAT WON THE HILL CLIMB.

taken of two or three steam machines taking on water, while we went on in the even tenor of our way. Shortly after this one of these vehicles passed us going down the long winding hill that leads into Glen Cove. A quarer of a mile ahead and a tiny flame appeared, disappeared, and then again peeped out. Another quarter of a mile and flames burst out in big sheets each side of the body and from the back. Opening the throttle of our machine and working the horn on the steering handle, we gave chase Just as we dispaired of attracting the operator's attention he looked over the side, reached down under the seat, and the flame was out quicker than it takes to tell. What was done was not found out, but from the appearance a jet of wet steam was opened. We then passed them, only to be passed in a half hour afterward in Hicksville.

What I may have thought or said of the wind before was tame to affairs after turning at Oyster Bay to cross the island toward the south. Going up the long winding grades cut through the banks, the wind blew at a hurricane rating. The surface of the road was swept so clean that for a time it was a puzzle to understand where all the small pebbles came from that were stinging the face with their number and frequency. Further looking about, as well as could be in the

low, couched position made necessary, showed that the wind was fairly digging sand and gravel out of the banks on the sides, and loading part of it into the passing vehicles

Along this stretch was seen the only real excitement throughout my trip. Six steam vehicles, representing four different makes, were hard at it in hammer and tongs fashion, each striving to pass the others. For half a mile was this excitement furnished, when a bend in the road cut them from view, not to be seen again until near the finish.

Jericho was passed three minutes behind schedule, and the same even running was kept up to Massapequa, where the control sign showed that we were yet three minutes behind schedule. In this last stretch of 10½ miles just a dozen vehicles had either passed us or been passed. In this run of 17½ miles across the island it had been one constant case of wind plugging, and if any hope had been entertained that the turn would bring relief it was futile in the face of the "smoky" so'wester.

And Freeport six miles away. There would be a change in turning to the north. We had turned to the east, turned to the south, and turned to the west, as in an oldtime childhood jingle. Running along this stretch was seen the first evidence of possible maliciousness. For a distance of not less than three miles the road was spaced with clams in the shell. When first noticed I thought they might have been dropped by some sareless teamster, but as the vehicle went on and on it was noticeable that they were placed with too much precision in distance apart and position in the road to have been carelessly dropped. Three miles of clams, spaced 25 feet apart, was worth money. As a malicious investment it was a failure. Those that weren't missed by the tires had their shells crushed into atoms.

Once or twice when a fast car went by us the operator with whom I rode replied to my statement that disqualification was ahead of them, that he didn't know but what he, too, would be tempted if he had the power under him. As an observer I was duly shocked; as an individual I could fully agree with him and appreciate what the temptation would be. This leads up to the only time on the trip that opportunity was given us to have a brush.

I was aboard a thorough good going machine. It wasn't claimed for it by its makers that it was a speed machine, but it can be claimed for it by them that it will go fast enough to break the average speed law. As we had evidently started out between others in our class, we neither overtook them nor did they overtake us, until a point just beyond the turn at Freeport. At this point we gradually crawled up on one in our rating, and from here on for the next five miles it was touch and go. Now we were in the lead, then the other vehicle, and at no time did more than a hundred yards separate us. At last we drew away, and for three-quarters of an hour we were again alone in our journey. The break was made by our late opponent, who passed us just before Lake Success, only to be passed again near West Hempstead. What happened to him he is not telling, but the returns show that he was in that bunched class of those who did not qualify or did not finish.

At Lake Success no control board was found, but as the map plainly showed a control at the sharp turn, I took our time and found we were just one and a half minutes behind the allowance.

Again we were just by ourselves until the above passing of our whilom opponent. The only evidence we saw in the mean time that there were other automobiles in the land was on turning the corner at Hyde Park, where a mate to he of the neck-and-neck affair was at work at the roadside fixing things. After passing No. —, well, never mind that, we

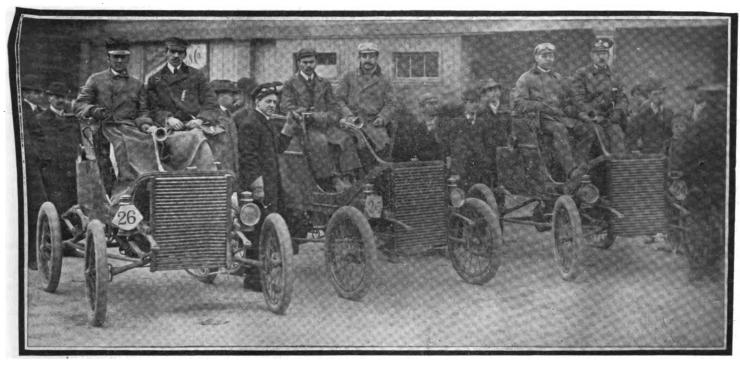
WITH A "YELLOW" ONE

Made Fun for Spectators but Next Day Brought "Angelic" Developments.

It is violating only my own confidence to say that I was one of the chaps who expected to draw one of the big gasoline cars. I didn't do it. I drew a—well, never mind its name, you never heard of it before, nor did I, nor did any one else; indeed, it did not even have a name. Despite the fact, and all other considerations aside, I think I may safely say that while I swallowed my share of sand, I had less excitement and hair-raising experiences than some of the others. But

ling exhilaration with which we mounted each grade. Car after car passed us. When their operators or observers were not otherwise occupied we were offered a tow, or urged to "get a move on." On the Roslyn Hill a photographer cheerfully informed us that we had enabled him to make a time exposure, while the crowd gathered there offered to give us a push if we required it. I think we scorched up the half mile of hill in something like ten minutes.

While every hill was as good as a halt, we, however, made but two stops, one of these within sixty feet of the top of a grade. At that point the operator threw in his low gear and the car came to a sudden stop. The operator assured me that "nature called." When he dismounted, however, he carefully surveyed the vehicle. When nature ceased



THE WHITE STEAMERS SHOWING CONDENSERS.

came up to an exhibition of tarantata dancing by the roadside. No doubt it was cold riding again in the face of that wind, I know I was feeling that way, and a little stamping about out of the vehicle would warm one up. That wasn't the case in this instance, however, because stamping on cushions, lap robes and things of that kind wouldn't the the way you would do; they are too soft. It is the hard ground that you want to tingle your feet when you are cold. The fact of the matter was that the occupants had been getting it too warm for their comfort.

After leaving Lynbrook behind us, just an even minute behind our reckoning, in two miles we commenced to overtake vehicle after vehicle of the fast brigade. For a moment the fear came to me that I had gone wrong in my figures, but a second look at my watch and another thought, and the word "foxy" came to my mind and to my lips also. The endless procession we passed from here in to the finish was watching that 6 hours and 40 minute minimum. As it was, four of them were disqualified.

I have reason to believe that the aftermath of my observation tour was far more interesting than fell to the lot of any of the others.

If appearances count for aught, I should say that my car had been finished the night before the test. It certainly looked it, and by a process of elmination and deduction I am inclined to the belief that on its performance in the run depended the capture of an "angel."

I desire it understood, however, that I was not in the scorching class. I will be as candid and admit that it was due to no fault or caution of my own. Before I had gone a mile I began to realize that I was "up against it." The first hill encountered impressed the fact on me, and each succeeding grade simply pressed it deeper, until, I may say if I have a soul, it went deep enough to impress itself on that article, if I may so term the soul. If you can imagine the swift flight of a snail uphill, you will have some idea of the tremendous pace and nerve ting-

to call he again examined the car. He tried the levers, turned the crank, and finally, placing his hand on the motor, assured me that it was hot. He fiddled around for some ten minutes, and when the motor had had time to cool another turn of the crank obtained explosions, and we were off again. The operator endeavored to excuse himself by explaining that while he had built the car, "the boss" had daubed the gears full of grease and they had clogged. Like the wise observer that I should be, I said nothing. But I charged the stop against the vehicle.

It would serve no purpose and add no interest to this story did I go into further details of my hundred miles. It was humdrum in the extreme. We violated no speed laws, won no prize for hill climbing, did not finish near the front, and earned no blue ribbons.

The real excitement came the next day, when an oily voice called me up on the 'phone. The Voice was anxious to know how I had enjoyed my ride. I dodged the ques-

tion fairly well, but remarked the creepiness of the vehicle on upgrades.

"Yes, I know that is one of its failings," responded the Voice, "and I am awfully sorry I did not get a chance to see you at the finish before you turned in your report. I would liked to have talked over matters with you."

This sounded mightily as if I had missed an opportunity to "have my palm greased," but I passed it over.

The Voice and myself discussed the two stops that the vehicle had made, and after some talk about the award the car would probably receive, the long distance interview ceased, and the matter passed out of my mind.

Imagine my surprise when on the following day the Voice again called me up. It informed me that I had made a mistake in timing one of the stops. I expressed surprise, and declined to admit that my scorecard was in error. The Voice appeared to grow excited.

"Do you mean to say that it is not possible that you may have made a mistake?" it

I acknowledged that mistakes were always possible, but refused to admit that one had been made in this case. My reply, however, gave the Voice the peg which it sought, although at the time I did not know it.

The next I heard of the matter was when I was asked to appear before the club committee. It came out that the operator had protested the "called by nature" stop, with car-examination accompaniments, which had been charged against him, and that the Voice would appear in person to emphasize the protest. At the hearing the Voice proved to be an elderly person with a paint brush beard. He impressed me as being a "comeon" or "go-between" which connected an inventor with an "angel."

Let it be sufficient that the protest was thrown out in short order, and let it serve as a warning to contestants to refuse to heed sudden "calls of nature" when gears begin to grind within reach of the summit of a hill. I should be sorry to be the means of causing an "angel" to take flight, but I believe some proverb manufacturer or other has stated, "Truth is mighty and must prevail." With proverbs in my head, I might suggest to the "comeon" with the paint brush on his face that if his "angel" has taken wing, he might take to heart the proverb, "There are as good fish in the sea as ever were caught." May good luck attend him in his effort to hook one!

The Vanderbilt-Rothschild Match.

Among the visitors to Nice was Mr. W. K. Vanderbilt, who was at La Turbie at the time of the hill climbing competition, and concluded a sporting match with Baron Henri de Rothschild over a distance of 125 miles. The match will probably take place between Paris and Trouville. They will both drive 40 horsepower Mercedes-Simplex vehicles, and the result will thus depend upon the skill of the automobilists and not so much upon the vehicles, for all the new Mercedes are wonderfully even in point of speed.

WITH AN "ALSO RAN"

Luck was Against it but Champagne Served to Drown Disappointment.

This observing business is a queer thing. It reminds me very much of that Biblical saying about the first being last and the last first. And, then, the worst of it is that you can never tell how you are going to come out.

When I stepped up to Mynherr Pardington on Saturday morning, with smiling face, but a curious sinking at my heart, I fingered the bunch of sealed, unmarked envelopes he handed me, and thought—swiftly, but very hard. The drawing of the billet made such a difference! Whether my lot should be cast with an aristocrat among the cars—one in perfect order, well handled, high powered and swift as the wind, perhaps with a Del-



ONE OF THE PRESCOTT STEAMERS.

F. F. WESTON AND W. H. WELLS.

monico sort of lunch, to be washed down with champagne, or some measley, crawling, ill smelling, troublesome little beast, run by a greasy mechanic—which of these it should turn out to be, I say, made a lot of difference to your deponent. Should I dive deep into the pack and extract one of the envelopes there contained, or take my chance on the topmost one of all? The last course, by all means, I cried; and so the die was cast and I lifted the one which was looking me in the eye, as it were.

As soon as I could gather together my three yellow cards, containing the map of the route and the instructions to operators and to observers, respectively, the programme, the ticket vouching, to my surprise, that I was entitled to a free lunch at the club's expense, I turned away and began fumbling at the fastening of the fateful envelope. It was open at last, and the number, "32," met my gaze. The programme told me that this was a big Foster steam car.

Making my way downstairs I met some of my fellow slaves on the Motor World and began to chaff them on their hard luck. They had drawn little vehicles or low powered ones or experiments, or steamers where gasolenes were desired, or vice versa, and they were all bemoaning their unkind fate.

First, catch your hare. If I was to enjoy my big steamer I must be sure that it was there. So over the yard I roamed, up and down the street I went, scrutinizing, questioning, wondering and finally fearing. There was no 32 there. It was early yet, however, and the vehicle might turn up at any moment. Whether it did or not, there was nothing to do but wait and see. It was weary waiting, with an overcoat and a mackintosh over one arm, a bulky lunch box secured on the other, and a notebook and pencil in the disengaged hands. Variety was added to the situation by two things. One was a rumor that the missing 32 had turned up and gone off without me; the other that there were more observers than vehicles, and the chance of getting another berth was very small.

The fates were a little kinder than that, however. At the eleventh hour the ear of the hardworking Webb was obtained and my woes poured into it.

"Here's No. 75 without an observer," exclaimed a voice, and, like a drowning sailor, I turned to it eagerly. It was ex-President Adams who spoke, and a few words exchanged between him and Webb settled the matter. I was transferred from the non-existent Foster to a large, looming and beautiful appearing Panhard with tonneau body, and almost before I knew it was hustled into the latter just as we moved off.

Had I been able to read the future my joy would have suffered an eclipse. Not even the champagne, which it afterward turned out was in the car's larder and served to wash down a lunch generous as to quantity, would have seemed an adequate compensation for the troubles to come. But of that nothing now.

It was then that the Biblical quotation referred to came to me. It was 10:09, and nearly everybody had gone; a few hungry eyed observers, fixing upon me unpleasant, envying looks, impressed me most strongly as we moved off. We had a long day ahead of us, however, and I felt sure that before the hundred miles were traversed we would be considerably nearer the front than we were then. At least we were certain to do so if we kept on at anything like the pace our driver was getting out of the car.

"Better not get to Flushing much inside of twenty mintes," I suggested. "It's only five miles, you know, and four minutes to the mile is the maximum speed allowed."

But my driver did not know, and I had to explain it at length. Then I told him we must be pretty nearly half way to Flushing and only about a quarter of the time had elapsed. So the speed was slowed until we seemed to be crawling. In spite of it all Flushing hove in sight with six or seven minutes still to be devoured by Father Time. To do our driver—who was also the owner—justice, he did his best from now on. As a result, when the first control was passed 1



was able to mark it eighteen minutes after the start without any great wrench to my conscience.

By this time we had all got well settled to our surroundings, and were breathing freely. The car was running finely; its only complaint was that it could not go out and eat up miles as it wanted to. But that was something that could not be helped.

Between Flushing and Manhasset the roads continued to be hard and fine. Suburban homes, fine old country places and truck farms divided the country between them. Here and there a glimpse of the Sound, its surface ruffled and glistening in the sun, appeared. The wind, a good, big capful of it, blew partly across us and partly from the rear. It was a good day to be out in the open air. The regularly throbbing engine in front of us seemed to be rejoicing in its strength, too.

Could a worse, a more unexpected time have been chosen for an accident? I trow not. A bolt from the blue sky above could scarcely have been more unexpected, and not a tithe as unwelcome.

But it came—that is, the accident. The top of a hill had been almost reached, when there came a crack, a rending and a thump; we were stopped; we were running down the hill again, our pace increasing, the car zig-zagging dangerously, wickedly! What did it mean?

It was very simple. A couple of chain links had broken and the chain had dropped to the ground. The engine was powerless to propel the car, the brakes would not act backward, and there we were. I measured the ditches on each side with my eye, and saw how close we came to them as we ran from side to side, also how rapidly our speed increased. Our man, James, saw all this, too. Evidently he preferred taking his chances out of the car, for he jumped. Heavens! He just cleared the wheels, and rolled over and over on the hard ground. That settled it as far as I was concerned. I would stay in the car.

We got to the foot of the hill finally, and the up grade soon brought us to a stop. We then alighted and took account of stock. James, the faithful James, arrived in a few minutes with the broken chain. He was covered with dust, his hands were badly cut, and he looked much the worse for wear. We who had stuck to the ship were uninjured.

To take out a couple of broken chain links and replace them with perfect ones, seems a small thing to do. But without a vise it is not easy. It took us two hours to do it, with the limited means at our command, and then the chain was minus rollers and other desirable parts. Decidedly, it was useless to go on. So, with dejected air and in silence, the car was turned toward Jamaica and our steps retraced without event.

The Automobile Storage and Repair Station, Buffalo, N. Y., has been removed to 523 Delaware avenue. It will be managed by D. H. Stowe.

WITH A SCORCHER

Scorch did not Appear so but was Warm Enough to Entail Disqualification,

Sh! If there are any Long Island constables about, don't breathe a word of it, but between ourselves, I was aboard one of the "black sheep"—I mean one of the disqualified vehicles. Our pace did not burn the road, but it was just fifteen minutes too fast for the time limit, and in consequence No. 52 does not appear among the ribbon winners, but it "got there" just the same.

In the drawing I may be reckoned a lucky one. Certainly I drew a splendidly running vehicle, a Locomobile, operated by a man who was at once companionable and who knew his business, George Knowles.

We neared Manhasset before we awakened to the fact that we were going a pace. At that point we were doing better than 18 per hour. It was being done without accident or excitement. I hardly realized that we were moving at such a speed. In fact, the first impression that I received was going down the steep grade out of Manhasset. Half way down that long, step hill Knowles fairly stood on his brake. He said nothing, nor did I. There was no evidence that the car was beyond control, but I confess I did something that I had never done before. In my mind I figured out what best to do in case of a runawey. With a ditch and a fence on one side of the road and a broad vista of country stretched below us on the other, I mentally decided that in case of accident sticking to the car would be safer than jumping. It proved calculation lost. Nothing happened.

At Roslyn we were still ahead of the record. We knew that the hill climbing contest occurred somewhere in that vicinity, but just where we knew not. The first we knew of it was when, after rounding a bend, a man standing at the side of the road yelled "Hill to climb!" Only that, and nothing more. We had no previousu warning, were unable to obtain proper headway, and really had no chance to do our best.

The north shore of Long Island is plentifully studded with camel-like humps, and the course wound up and down, in, about and around, and in every other conceivable direction. The wind swept it like a young tornado. At times it appeared as if it would blow us to a standstill. It gave Knowles a deal to think about. He was forever leaning over the right side of his vehicle, observing the fire. Finally the carriage slowed. He jumped out of it before it stopped, and almost before the wheels had ceased to turn was back again. The fierce wind had extinguished his burner.

"That stop cost you twenty seconds," I remarked, putting away my watch and noting the fact on the score card. "You came pretty close to doing it without stopping the vehicle."

"I didn't think of it at the time," he said, "or you can wager it wouldn't have stopped."

A little later he proved this possible. He again jumped out while the Locomobile was in motion and, walking beside it, inspected the fire. This time, however, it proved a false alarm, and he regained his seat without losing a second of time.

After leaving Roslyn we passed few competitors and few passed us.

While some one has stated that the wind was southerly, it was difficult to believe it. It seemed to come from no direction and from every direction, and there was yet a breath of winter in it. Twice Knowles donned his goggles, and as often removed them. After the second removal he wore them no more, despite the sand which fairly filled the air.

"I an't hear well when I'm wearing them," he remarked, and added, "I depend on my ear almost entirely to know whether things are going right."

After leaving Oyster Bay it was as if we had dropped into another country. Where only hills had existed before, there were now only levels, or certainly nothing worthy the term "hill." We also left behind the blaky horses which seemed indiginous to the north shore, and one of which, in charge of a terrified negro, caused us a long crawl and a short stop of thirty seconds.

At Hicksville we made our second stop, for water. While there Knowles tightened a nut on his water valve which had worked loose. A watchful checker of the Long Island Club was on hand, and promptly called my attention to the fact. Although the hills had been left behind, the wind was still with us. With his right hand on the throttle, his left elbow on the steering lever and his head ducked against the wind, Knowles endeavored to dispose of a sandwich. A great gust of dust struck him at the moment. As he sat it out he remarked sententiously, "And they call this sport!" When we passed the mate to Knowles's car and the Locomobile that had won the hill climb it was in trouble at the roadside. Shouts were exchanged, but the high wind carried away the reply to our inquiry.

On the Merrick Road we drew closer to a Toledo which had been in sight for several miles.

"If I catch that fellow," observed Knowles, "I'll give him a run for his money."

He caught him. There was no money in sight, but for a mile or more there was something of a run. Despite the fact that we exceded the speed limit, I can solemnly affirm that this was the only occasion on which anything that suggested or felt like a scorch was indulged in. Shortly after a short pop suggested a puncture. But the tire remained hard, and it was not until the next water stop that a nail was found embedded to its head in the Diamond tire. It called for no repair, however, and caused no inconvenience. The tire softened somewhat, but carried us home 'safely.

We were still dong better than fifteen per



hour. I remarked the fact to the Locomobile

"What's the penalty?" he inquired.

"As I take it," I ventured, "you may be disqualified; I do not know that you will be." I thought I was on safe ground.

At Hempstead, I think it was, there were two Long Island officials at the water station. Before we left one of them implored Knowles, whom he knew by name: "Whatever you do, keep within the rules. Don't finish inside of 6 hours and 40 minutes."

It was in this vicinity that another steamer passed us. I waved a good-bye to the observer, whom I knew.

"We won't say good-bye yet awhile," he called back.

He spoke prophetically. Within a mile we passed them. They were at the side of the road with a broken chain.

The wind still blew. Knowles still damned it. Passing a Toledo, he called out to the operator, "How does the wind suit you?"

"It's flerce," called back the Toledo man.

"If we get through without burning up," Knowles shouted in return, "we'll be in luck. We've had flames a foot high under us half the way."

The Toledo man shook his head knowingly. The knowledge was "cheering," and to a man with nerves on edge would have given some uneasy moments.

As we drew near the finish at Jamaica 1 did some figuring, and remarked to Knowles that he was well inside the time limit.

"We'll be the first steamer in, anyway," he said.

"Better think it over," I cautioned.

If Knowles thought he said nothing; that is, not until within plain sight of Pettit's Hotel. What he said then would not bear printing. With less than two hundred yards to go, it would have required more than thirty minutes to cover the distance, and it was just at this point that Knowles brought the vehicle to a stop, and, jumping out, found that his boiler was dry as a bone. Not a drop of water remained in it. He vaulted a fence nearby and returned with a bucket of water, and tried to reach the finish line on that supply. The Locomobile would not budge. When he returned with another bucketful two friends from the hotel ran up and brought the cheering information that all the vehicles that had finished up to that moment had been disqualified for violating the speed rules.

Three buckets of water was sufficient to give us steam, and after a loss of 131/2 minutes the Locomobile crept toward the finish line. Knowles was in a quandry. He had at least fifteen minutes to kill to avoid disqualification.

What would you do?" he asked of me. "Run around the block and keep moving until the time's up," I suggested.

At that moment Knowles looked behind him. The Toledo, which had been left miles behind, was in plain sight. It decided Knowles.

With the remark, "There's that Toledo. I must beat it in," he opened the throttle and rode to disqualification. He had lost all hopes of a ribbon, but he was the first steam carriage in, and that was balm of a sort.

WARNINGS IN PLENTY

Action of Committee in Disqualifying Speeding Vehicles Forshadowed.

To one who has followed the matter closely, the disqualification of the vehicles which covered the course in faster time than 6:30 was plainly foreshadowed. There was really no ground for surprise in the action of the committee.

There is at the present time a tendency to overlook the fact that the maximum legal rate of speed for an automobile in greater New-York is fifteen miles an hour. This misapprehension prevails even among supposedly well informed persons. Such is the case, however. The ordinance now in force limits the speed to fifteen miles. If there was no ordinance the new Cocks law will take effect, and under it the speed could reach twenty miles. But the Cocks law does not supersede the older Doughty law.

This being so, the Long Island club had no



CHAS. D. COOKE AT THE WHEEL.

alternative than to fix the maximum speed at fifteen miles an hour. It was so stated in the rules of the contest, a copy of which was sent out with each entry blank. The programme issued by the club also contained this intimation.

· Any one who read the rules-a duty devolving upon each operator and observermust have been cognizant of the fact. At the smoker of the club on Friday night H. B. Fullerton laid particular stress upon the feeling against automobilists at Hempstead and other places, and implored the contestants to observe the legal limit. A Motor World representative made it a point to ask both Messrs. Pardington and Webb whether a vehicle exceeding the legal limit would be disqualified, and was answered in the affirmative.

On Saturday afternoon Referee Scarritt was approached and asked what would be done with the vehicles which were then coming in rapidly, all of them much ahead of

time. "If I have anything to do with it," he replied, "they will be disqualified." Similar talk was indulged in freely in and around Pettitt's Hotel.

In the interval between Saturday and Wednesday night, when the committee made public its report, there was much discussion as to its probable action. The question of disqualification overshadowed everything else. Vigorous protests were being made against this threatened action by some of the offending vehicle owners, but the majority of them seemed to take it for granted or said they did not care.

The Motor World representative made it a point to interview many of the offenders' observers as they came in on Saturday. It developed that in most cases speed was the avowed object of the operators, the ribbon being considered of secondary importance. A few professed ignorance of the fifteen-mile rule.

It may be stated authoritatively that the matter was settled by the committee before the awards were made. It was held that a distinction should be made between operators who openly and intentionally went over the course with the object of making fast time and those who, while endeavoring to observe the legal requirements, yet failed to calculate right and brought in their vehicles a few minutes ahead of time. It was decided, therefore, to set ten minutes as an impassable barrier. Any vehicle which got in inside of 6:30 was to be disqualified, but outside of this they were safe. As it turned out, the fastest of the favored ones was but seven minutes inside of the 6:40 limit, so there was no heartburning on that score.

At the rooms of the club on Wednesday night the awards were given out. Instead of singling out the disqualified vehicles the committee lumped them with those which did not cover the course—that is, those which dropped out for any cause. There were twenty-nine vehicles in the two categories. In this way it was hoped that the offenders would escape mention. Asked if he had any statement to make regarding the disqualifications or the protests made against them, Chairman Pardington said:

"We decline to say anything regarding either matter. There were a certain number of vehicles which covered the course under the rules and are given awards. The others did not do so and they get nothing.

An unofficial list of the disqualified vehicles has been prepared by The Motor World representative, who was present at the finish and took a record of them. They are as follows:

No. Name.	Remarks.
3. Darracq	No stops.
31 Panhard	···· do
22De Dion	···· do
55. Darracq	· · · · do
65. Fournier-Searchmo	nt do
69. Fournier-Searchmo	ut do
16Knox	···· do
80. Fournier-Searchmo	nt do
4Darracq	· · · · do
52Locomobile	· · · 2 stops.
77. U. S. Long Distance	e 2 stops; gasolene.
49U. S. Long Distance	e1 stop; water.

TWO PROTESTS

Both Grew Out of the Speed Disqualifications—They Differ.

An aftermath of the burning question of the hour—the exceeding of the speed limits in the run of the Long Island Automobile Club on Saturday—is the action taken by the National Association of Automobile Manufacturers. On Monday the executive committee got together and drew up a protest, addressed to the club, against the violations so extensively practised. The protest is couched in strong language, so strong that it leaves no possibility of doubt as to the feeling of the committee and its desires in the matter. It is as follows:

"We hereby record our protest against the performance of certain contestants regularly entered and started in your recent 100 mile endurance contest. We refer to those parties who, with full knowledge of your rules and the State laws, deliberately and defiantly broke the State laws and the most important rules of the contest, with the evident intent of using your endurance contest as a means of advertising themselves and making the real winners of your contest appear ridiculous in the daily press records of your contest.

"We think that your club should take prompt and vigorous action to place the winners of your contest in a proper light and also to penalize in every way possible those who deliberately did all in their power to disregard your most essential rules and thereby interfere as far as possible with the proper conduct and good results of your contest

"Unless the winners of your endurance contests can feel perfect confidence of securing the credit usually given to winners of contests in the public reports of the events your endurance contests are likely to lose their deserved popularity.

"So far as our members are concerned they do not feel inclined to enter any further endurance contests where any contestants or outsiders are allowed to run over the course among the legitimate competitors while deliberately disregarding the fundamental rules of the contest.

"It is our opinion that any and all such parties should be forcibly prevented from running very far over the course during the contest, by arrest or such other means as will prove sufficient.

"In your future endurance contests it would seem essential to the interests of the legitimate competitors that you should have such control over the course or parts thereof as to enable you to forcibly prevent notoriety seekers from intentionally damaging the value of your awards, as was done last Saturday.

"It seems evident that mere disqualification is an entirely insufficient method of disciplining such parties, who are glad to be disqualified for the advertising effect produced thereby. To arrest them after they have finished may be helpful, but if such parties realize that they cannot possibly run far over the course without being forcibly stopped they will immediately cease from using for such illegitimate advertising purposes your otherwise very valuable endurance contests."

On the other hand, the cause of the disqualified vehicles is championed by General Manager Gallaher, of the Fournier-Searchmont Co. He addressed a communication to the club protesting against disqualification, in case it were contemplated. He gives the following reasons against such action in a formal protest, which is, as far as known, the only one lodged on behalf of the vehicles which reached Jamaica too soon:

"First—Nothing was said in your printed rules regarding cars being disqualified for speed in excess of fifteen miles an hour.

"Second—We asked our official observer as to this point before starting, and he in turn inquired of one of the committee in the presence of the writer, who informed him that he supposed we could exceed fifteen miles



C. B. GALLAHER AND REFEREE SCARRETT.

an hour, as nothing was mentioned about it in the rules.

"Third—The writer was informed by a member of the committee that all information regarding rules, etc., should be obtained by him from his official observer.

"Fourth-My official observer told us we could go as fast as we pleased, as nothing was stated regarding the matter in the rules.

"Fifth—In the Buffalo endurance contest there were no speed disqualifications, though many ran far beyond the club and legal limit—the club, however, gave no credit for any speed over fifteen miles an hour. A precedent was thus established.

"Sixth—Cars Nos. 65, 67 and 69 made a 100 per cent. record.

"Seventh—We have violated no club dules.
"On the above facts I respectfully request
a first class certificate for the three Searchmont cars above mentioned."

The committee of the Long Island Club having charge of the run, however, disregarded the protest.

"OUTRAGE!" "INSULT!"

Fullerton Fires Some Hot Shot Into the Offending Scorchers,

Hal Fullerton, that bundle of nerves who is such a factor in the affairs of the Long Island Club and in nearly all else that concerns outdoor life on the island, fairly quivered with indignation. He has just snapped his camera at one of the offending scorchers as it entered the hotel yard at Jamaica, and being twitted by some one he "broke loose." The words, each spoken as if bitten off with a vicious bite, came with the force and speed of the explosions in a spiteful motor. The luxuriant shock of silver gray that covers the Fullerton caput shook with the vibration that came from beneath it. Fullerton was mad-mad clear through-and he didn't care who knew it.

"It's a damned outrage!" he ejaculated. "It's an insult to the club. I hope every one of them"-meaning the scorchers-"get all that's coming to them, and the harder they get it the better I'll like it. There's that man that says he covered the course in 2 hours and 52 minutes. Who timed him? Who checked him? Why did he do it? Why did the rest of them do it? Bah! Simply for advertising purposes. Simply to show off and get themselves into print. There is no excuse for any of them. They knew the speed limit just as well as we knew it. They knew that all the hue and cry against the speed of automobiles started on Long Island. They knew we were trying to overcome the sentiment against us. They know that they were warned at Jericho and urged to keep within the law. But they paid no attention to any one or anything. They had no regard for us. They had just one aimto get press notices-and I hope to heaven they will get the kind they deserve. They"-

"If you don't let up, Fullerton, I'll take a picture of you in the act," interrupted a newspaper man with a camera, who backed away to make good his "threat."

"I don't care what you do. I mean every word of it. I say again that it was a damned outrage and an insult to the club."

Another Superintendent Changes.

Sid. D. Waldon, superintendent of the Foster Automobile Mfg. Co., has resigned to accept a post with the Ohio Automobile Co., of Warren, Ohio. Mr. Waldon is a capable man, and is sure to strengthen the already strong Packard organization.

New Foster Gasolene Car.

The Foster Auto Mfg. Co. are preparing to bring out a new gasolene car. If this new-comer is as good in its class as the Foster is among steam cars it will leave little to be desired.

The Rochester Auto Co., J. J. Mandery, proprietor, is doing a large business with the Baker electric, which has caught on in Rochester, as it has everywhere else.



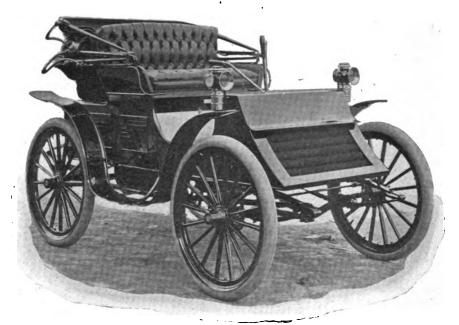
100 PER CENT.?

Small need to ask the question regarding

THE HAYNES-APPERSON

If ever there was a "blue ribbon vehicle" it is the one, and the Long Island test simply sustained its reputation.

It is built "to get there" not only in "endurance runs," but in the runs of everyday usage; and all the world knows that it does what it was built to do.



It follows that the Haynes-Apperson—3 of them—"got there" in the Long Island Club's 100-Mile Endurance test, 2 of them going through without a stop and without trying to violate the speed regulations.

In the Long Island tests last year and in the New-York-Buffalo Endurance Run last Fall, the Haynes-Apperson was in the Blve Ribbon class, too.

THE HAYNES-APPERSON CO., Kokomo, Ind.

HOPELESSLY INVOLVED.

Politicians Want Laws Aiready on the Books and Voted for by Them.

Undoubtedly the gentlemen who spoke on Friday against the proposed municipal ordinance increasing the legal speed of automobiles in this city from eight to ten miles an hour are well meaning; but it is equally indubitable that they were exceedingly ill informed and that they did the cause they had at heart little good.

The occasion was an extra hearing granted to those opposed to the ordinance, and held before the Aldermanic Committee on Laws and Legislation. The Twenty-seventh Assembly District Republican Club had projected itself into the matter by conducting a postal card canvass designed to ascertain the sentiment of the person approached regarding the ordinance. More than seven thousand postal cards were said to have been sent out, and answers, mostly in the negative, were received from a very small minority of those addressed.

Upon this exceedingly slight foundation, and because the introducer (by request) of the ordinance, Alderman Oatman, came from the Twenty-seventh District and was a member of the club, the latter felt itself impelled to take the matter up again. A public hearing, duly advertised, had already been held. It demonstrated that the ordinance had str ng support from all users of the streets except pedestrians. Nevertheless, the aduitional hearing was asked for and obtained. To it came the eloquent speakers of the club, "loaded for bear."

It took but a short half hour for these worthy gentlemen to demonstrate that they were quite unaware of the exact location of their own whereabouts—in other words, that they did not know where they were "at." Each one of them wrote himself down as being painfully ignorant of the subject upon which he essayed to speak. The longer he talked the more hopelessly involved he became.

They demanded the passage of laws already on the statute books. Means of repression already possessed were asked for. It was freely admitted that the eight-mile ordinance was unenforced and unenforceable; yet they demanded that the present situation, denounced as intolerable, be maintained. Had they been possessed of the normal amount of wit they must have perceived their predicament and felt the prick of the pointed questions asked of them by Chairman Matthews. But they gave no sign.

James W. Barry, Republican leader of the district, was the first speaker. "We have mailed upward of 7,000 postal cards," he said. "From them we have received about 1,100 replies, containing the addresses of the signers. Of these 998 voted against the ordi-

nance and 78 voted in favor of it. Here are the former," pointing to a bulky package, "making a bundle 1½ feet high. The noes are there," indicating another one, "and they measure but 1½ inches."

"Bicycles and automobiles both go too fast. If a speed of ten miles an hour was permitted the streets would be turned into race-tracks. No conviction can be obtained under the present law unless it is proved that a speed of ten miles has been exceeded."

Assemblyman Davis related a story to the effect that he had been reliably informed that in Columbia County automobilists carried with them printed cards bearing this legend:

All Claims for Damages

Settled at the Office of Lawyer Blank,

New York City.

When any one was killed or injured by the fast flying automobiles one of these cards was tossed out to the victim or his surviving companions.

Here Chairman Matthews asked the speaker why the Legislature had passed a law permitting the aldermanic body to legalize a greater rate of speed than eight miles. This was rather an ugly question for the member of the former body to answer, but he finally admitted that he had in the Legislature favored a greater speed outside the built-up portions.

"What's the use.of a fine?" he asked. "Why, none at all! They simply pay the fine and break the law over and over again. What's a few dollars to a millionaire who wants to dash through a town and cares not for the lives or property he endangers? Every day we read in the newspapers of people being run over by automobiles. But if you take off the fine and provide a severe term of imprisonment instead there will be a change. No millionaire will then risk his precious liberty where he would not care a rap for the fine he would have to pay. That's the only way to stop this reckless driving of automobiles around the town. Do that, and don't increase the speed limit."

And yet this man, an Assemblyman, who had probably voted for it, professed ignorance of the fact that just such a law had been passed at Albany only a few weeks ago! Under it a man can be imprisoned for a second offence.

W. D. Murphy said that as the pedestrians largely exceeded other users of the streets their rights should be conserved, and as they were in danger from automobiles the present limit should not be increased.

The point was made by H. S. Stimson that the ordinance made a class distinction. He explained this by saying that automobiles were owned by the wealthy, and it was now intended to give them greater privileges. On Fifth avenue at certain hours even eight miles an hour was entirely too great a speed, but out in the suburbs an increase could safely be permitted.

Colonel Bates, of the 71st Regiment, began by saying that he had ridden about forty thousand miles on a bicycle in this city. His usual speed was twelve to fifteen miles an hour, but he had never been arrested. He thought that a distinction should be made; that in crowded streets a slow speed should be maintained, and outside a faster one permitted.

Several other speakers were heard, all of them to the same purport, viz., that automobilists did not observe the present ordinance, and that if it were changed the speed would simply be increased and they would violate the law just the same. "Make them go slow at some times," they exclaimed, unmindful of the fact that the present laws expressly forbid them to at any time exceed a "reasonable and proper" speed.

They were almost equally unanimous in admitting that outside of the built-up portions a greater speed than eight miles an hour could safely be permitted—a privilege that as yet has not been even asked for.

For Uniform Guarantee.

The matter of a uniform guarantee for all makes of automobiles is receiving the attention of the National Association of Automobile Manufacturers. At a meeting of the Executive Committee of that body, held on Monday last, it was decided to ask all the American manufacturers for a copy of the guarantee they now give, if any, with a view to coming to an agreement on a standard guarantee for American made machines.

The date for the next Automobile Show to be held in Chicago was fixed for February 16 to 23, 1903, both inclusive. The opening of the Chicago Show will, therefore, be two weeks after the close of the New York Show.

The association will publish a directory of repair shops and supply stations for the use of automobile tourists. The first edition will contain the names and addresses of all reliable stations in the States of New York, New Jersey and Connecticut.

Baldwin Plant Sold.

A second and successful attempt to dispose of the Baldwin Automobile Works at South Connellsville, Pa., at trustee's sale was made on Saturday afternoon, the purchaser being J. C. Kurtz, of Connellsville. The price was \$32,000, subject to a mortgage of \$6,500 and interest for about a year. George L. Humbert and Joseph Soisson also bid on the property.

Conrad Delivery Wagons.

Secretary Puget of the Conrad Motor Carriage Co., Buffalo, N. Y., is in New-York this week. He has with him one of the company's new delivery wagons, which has been very favorably received. It is said that Seigel-Cooper Co. are considering the purchase of several of these vehicles. The Conrad company has placed its agency in this city with B. L. Wright, 523 Fifth avenue,



IN THE L. I. A. C. 100 MILE NON-STOP RUN, APRIL 26, The...

100 Per Cent.

BLUE RIBBON.

VIOLATED NO SPEED LAWS; DID NOT WANT TO. TOOK ALL HILLS, ALL LEVELS AND ALL THE ROUTE AT THE OFFICIAL 15-MILE RATE OF TRAVEL.

Not a special machine fixed for the run—just one of our regular 5 H. P. vehicles that has been long in use by its owners, entered and driven by them.



Elmore Mfg. Co.

CLYDE, O., U. S. A.

We have got more vehicles exactly like the winner, which we will sell at \$800. It is a \$1500 auto with a 2-cylinder Three positive speeds motor. forward and reverse.

ACTUAL FACTS

\$750.00. SIX HORSE POWER. 900 LBS.

Double Cylinder **Balanced** Engine. NO



100 Miles Capacity. Speed 20. 20% Grades. Water for 300 Miles.

HYDRO CARBON.

NO GEARS.

STARTS FROM SEAT.

The Quickest and Easiest Controlled Machine ever built. Full Platform Springs. Rides as Easy as a Rocking Chair. Easy to Buy.

GOOD **AGENTS** WANTED. 3 East Van Buren St., CHICACO, ILL.

TRIED. TESTED. PROVEN.

LONG DISTANCE" TIRES' RECORD

LONG ISLAND ENDURANCE RUN.

Of the several sets entered not one tire caused the slightest trouble.

NO PUNCTURES, ACCIDENTS OR OTHER MISHAPS.

The HAYNES-APPERSON MACHINES winning the Blue Ribbon were equipped with them. Last year's winner also had them on and they are still in use, having given over 4,000 miles service to date without accident.

The winners in the New York-Rochester Run used these tires. They were the only tires entered earning the exclusive right to a 100 per cent. Record.

IN EVERY SPEED AND ENDURANCE CONTEST IN WHICH THEY HAVE BEEN USED THEY WERE ON THE WINNING MACHINES.

"Long Distance" Tires positively eliminate all possibility of "tire troubles." Can you afford to experiment with anything else?

25 Park Place,

BRANCH OFFICES :- Boston, 24 Summer Street; Philadelphia, 724 Chestnut Street; Baltimore, 101 Hopkins Place; Chicago, 150 Lake Street; Indianapolis, 229 S. Meri dian Street; St. Louis, 411 N. Third Street; San Francisco, 509-511 Market Street.

AGAIN THEY ARE WRONG

Theorists Despair Over Comparative Weight and Power of Gasolene Motors

As the bicycle used to be the wonder and despair of all, or nearly all, engineers who examined it, they finding abundant reason thereby for the assertion that it could not carry a rider weighing many times as much as itself, so others of the same class find much that is almost inexplainable in the gasolene motor of to-day. A good illustration of this is found in the mournful plaint of an Englishman, who demolishes the explosion motor in this fashion:

On many occasions it has been stated that the aim and object of an engineer's training and subsequent practice are the obtaining, for useful employment, from one ponud of coal all the energy it contains, or, failing all, as much as he can.

There is a greater truth in this statement than the ordinary person will at first appreciate, but to those who are already familiar with the subject, and perhaps those who are familiar therewith only to a limited extent, the mere statement will at once make them review in their mind's eye a few of the many devices they know of, and which are designed with the one object of turning into useful work more of the energy lying inert in the "black" diamond of commerce than can be done without them.

Among these devices may be mentioned the various designs for boiler furnaces, the "fire tube" construction where the fire passes through tubes surrounded by water, and the "water tube" construction where the water lies in the tubes, the fire surrounding them, then the feed water heater which utilizes the heat that has escaped from the furnace to heat the water which will be forced into the boiled to supply the place of that evaporated; or, again, the "condenser," which accepts the steam that has by pressure caused the engine to do its work, and by again turning it into water causes it to add to the work already done; further, work by a suction or vacuum action.

With all the traditions of a training and experience which have produced such devices, how entirely out of harmony with it all must a "steam" engineer find the "explosion" or gas engine in the present state of its evolution! He finds the fuels, whether they be gases or heavier liquids, such as hydrocarbons or alcohol, have been selected (like his beloved coal) by reason of their possessing a like store of inert energy which can, more or less readily, be converted into energy in the form of heat, to be again transformed into energy in the form of mechanical motion. But in every example of this style of engine he examines he finds a state of affairs which, had they been found within his own domain, he would have used the

expressions "insanity" or "criminality" in speaking of the engineer responsible.

What does he find? Well, in every explosive engine, or "motor," as we with our modern liking for a refinement of technical expression have dubbed it, he finds that heat enables it to do the work demanded of it(but what proportion of the total heat given it, in the inert state in which the fuel has stored it, is used directly in doing that work? All ordinary matter expands on the application to it of heat. If the matter under consideration be ordinary air in a closed vessel, that expansion will produce a pressure.

Our motor is constructed to draw within its cylinder an amount of air which we can control; with this air is admitted a given amount of fuel, which is at the right moment allowed to burn and heat that part of the air which does not combine with it in the process of cumbustion, and this heating taking place within the closed cylinder producing the pressure necessary to drive the piston through its "stroke," the piston so energized gives up its energy to the other parts of the mechanism; but what else has been done? We find that not only has the charge" been heated, but it has been overheated, and when the "stroke" of the piston has been accomplished the piston returns and thrusts out into the surrounding air, either directly or through the baffler or silencer, the charge still at high pressure, and still hot. Moreover, the whole mechanism with which that charge has come into contact has taken some of the heat, and actually some most ingenious devices have been constructed which shall take off that heat and distribute it into the surrounding

No wonder our engineer friend would stand appalled when he actually saw what he had hitherto considered as a fundamental principle and the root of all his practice, viz., that heat is pounds, shillings and pence, set utterly at defiance, and the said pounds, shillings and pence simply helped to be gone by the most convenient and easy road.

And here we have reached the point to which the writer would like to call the attention of those not yet considering the subject.

The inventor who will afford automobilists a motor converting into useful mechanical work most of the energy we pay for when we buy petrol or essence—call it what you will—will do more than any man to help the industry to go ahead for the benefit of the many who are, and the still larger number who would be, within our ranks.

To all of which this effective reply is made: "Despite the efficiency of the internal combustion engine being lower than it will one day be, it is as it stands the most economical form of engine for the powers needed for automobile propulsion. Economy of fuel is a virtue, and a great one; but reliability, simplicity, cheapness of manufacture and upkeep are more important than cutting down the coal bill, though that will come in good time—in fact, much has already been done in this direction."

WITH A HISTORY ATTACHED

An Automobile Travels From Germany to Chicago With Notable Stops en Route.

"Westward, ho!" is still the cry of the "White Ghost," that new Flying Dutchman, whose fabled career bids fair to be quite as varied as that of the unhappy mariner referred to. A Mr. Drake, of Chicago, is said to have purchased the celebrated automobile, the consideration being placed at \$10,000.

The "White Ghost" has long been a shining mark for the "yellow" journals and other purveyers of the sensational. According to these veracious narrators, it killed its first owner, a French Count, who undertook to scale the Alps in it. It was then banished to this country and came into possession of that fortunate youth, "Willie" K. Vanderbilt, Only the Vanderbilt luck can account for the fact that in his hands it was run "wide open" without bringing him to serious grief. Eventually he tired of it and displaced it with something more up to date and less notorious.

After a period of brief obscurity it came to the surface again, this time in the hands of Broker Thomas. It resumed, or continued, its death dealing career by running over and killing a boy. In disgrace it was advertised for sale, and now a resident of the Windy City is found courageous enough to make it his own.

From Germany to Chicago, with more or less prolonged stops in Switzerland, France and New York, is a far cry. One ocean has been traversed, with portions of two continents. Of the future it is impossible to say. It may be the destiny of the machine to continue across the continent, or even to traverse the broad Pacific, thence to enter upon the last and the longest stage of all. finding rest at last in the place of its birth. Who knows? It would not be more wonderful that some of the stories related of it.

Oil in Solid Form.

Referring to the attempt, recorded in an English paper, to make use of gasolene in a solid form, Thomson McGowan, the Standard Oil Co. expert, writes to the Motor World:

"The use of oil in solid form has been frequently discussed in times past, and on several occasions it has been claimed that successful results have been secured by such use. Personally I have never seen any oil in solid form that would be available for practical use. It is, however, quite possible that in this age of discovery the gentleman in England has succeeded in securing a better product than has heretofore been found possible. Unless I had an opportunity to examine his product and give it a practical test, I would not be competent to pass judgment upon it."



The Week's Patents.

697,409. Speed Regulator for Explosive Engines. John S. Klein, Oil City, Pa. Filed May 3, 1901. Serial No. 58,636. (No model.)

Claim.—1. In a mechanism compressing gases, the combination with the cylinder and compressing piston therein; of a valve device arranged to control the period of admission of gases; means for opening and closing said valve device, said means being subjected to the reduction of pressure incident to the suction stroke of the compressing piston and an opposing pressure; and mechanism controlling the application of the pressure so reduced by the suction movement of the piston to open and close the valve.

697,564. Pneumatic Tire. Charles E. Thomas, Tucson, Ariz. Filed Sept. 23, 1901. Serial No. 76,231. (No model.)

Claim.—1. A tire embodying a series of tubes, each with a valve, and a pouch common to all of said valves and tubes, said pouch inclosing the ends of the tubes, and inclosed by the tire.

2. A tire of the character described, embodying a series of tubes, an inflating valve for one end of each tube and a flexible pouch inclosing said valves and stems, said pouch provided with an inflating valve and inclosed by the tire.

697,621. Pneumatic Vehicle Tire. Edgeworth Greene, Montclair, N. J., assignor, by mesne assignments, to the American Rubber Works Co., a corporation of New Jersey. Filed Jan. 4, 1902. Serial No. 88,371. (No model.)

Claim.—1. A pneumatic rubber tire provided with lateral thrust-weight carrying ribs, projecting from its sides, said ribs being located in a position to carry a part of the load and to receive the lateral thrust of the tire directly under the edges of the wheel rim, leaving a non-contacting space between the upper side of the said rib and the top centre of the tire, substantially as described.

697,464. Motor Vehicle. Charles D. Mosher, New York, N. Y. Filed Aug. 11, 1900. Serial No. 26,577. (No model.)

Claim.—1. In a motor vehicle, the combination with the vehicle body, of a wheel and a cross connection therefrom, a substantially straight bar spring extending longitudinally of the vehicle and attached at its inner end to said vehicle body and at its outer end to said cross connection, whereby the vehicle body is yieldingly supported, and a longitudinal thrust bar pivoted at its inner end to the vehicle body and its outer end to said connection.

697,722. Automobile Frame. George A. Hunt, Reading, Mass., assignor of one-half to F. C. Alden, Reading, Mass. Filed Feb. 11, 1901. Serial No. 46,869. (No model.)

Claim.—1. In an automobile underframe the combination of a crossframe for the driving wheels comprising a substantially vertical yoke, upper and lower outwardly converging diagonal bars projecting from both sides of said yoke and connected at their outer ends, tubular axle housings located between the upper and lower diagonal bars on each side, longitudinal perches attached to the upper diagonal bars, and diagonal braces connecting said perches with the lower diagonal bars and located in substantially the same vertical planes with the perches.

697,945. Running Gear for Motor Vehicles. Harry A. Knox and James H. Jones, Springfield, Mass., assignors to Knox Automobile Co., Springfield, Mass., a corporation. Filed Nov. 21, 1901. Serial No. 83.118. (No model.) Claim.—1. A running gear for motor vehicles consisting of a pair of axles, two springs constituting the reaches of said gear, supports on said axles for the ends of the springs, and a rigid arm secured by one end to one of the springs near the centre of the latter and extending to one of said axles and having a pivotal connection therewith.

698,042. Electric Ignition Device. Arthur R. Mosler, New York, N. Y. Filed Feb. 3, 1902. Serial No. 92,387. (No model.)

Claim.—1. An electric ignition device comprising a conducting wire, a shoulder nut screwed thereon, reversible insulating blocks surrounding the wire and nut, arranged to hold the nut against movement for causing the wire to be moved longitudinally as it is rotated and a plug and cap for holding the parts assembled.

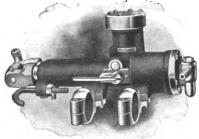
698,115. Mold for the Manufacture of Cellular Cushion Tires for Wheels of Bicycles or Other Vehicles. Charles Hird, Woonsocket, R. I. Filed Sept. 11, 1901. Serial No. 75,080. (No model.)

Claim.—1. The improved mold for the manufacture of cellular cushion tires, consisting of a plurality of longitudinal blocks, a set comprising a plurality of matrix pieces mounted movably on and supported by each of said blocks, means for holding the matrix-pieces to their companion block, and means for holding said blocks together, substantially as described.

698,188. Automobile Mowing Machine. George H. Ellis and John F. Steward, Chicago, Ill. Filed Jan. 11, 1901. Serial No. 42,895. (No model.)

Claim.—1. In a mowing or other machine adapted to perform work while being self-propelled over the ground, a rotatable shaft, connecting mechanism adapted to operate the parts required to perform the said work while passing over the ground, said shaft connected to the traction wheels by gearing adapted to permit the traction wheels to operate independently when either is under restraint caused by the steering mechanism, a motor for said shaft, and means between the motor and shaft to cause the driving action of the motor upon said shaft to be either forward or backward, all combined with the steering mechanism, substantially as described.

THE REASON AUTOMATIC AIR PUMP for steam vehicles.



Keeps the air pressure in the fuel tank wherever desired automatically, without care or attention.

We also make the REASON JR. AIR PUMP "Non-Automatic," which is controlled from the seat of the wagon.

Write us for circular with full description.

EASTERN AGENTS:

CHAS. E. MILLER, 97 Reade St., New York.

SPALDING-BIDWELL, 29 W. 42d St., New York.

POST & LESTER, Hartford, Conn.

The Prescott STEAM TOURING CARS.

Superior in Style, Design and Finish.



New Indestructible Burner.

Pilot Light.

Holds Steam to Any Desired Pressure
and Never Blows Out.
American Roller Bearings.

Superheated Steam.

Greater Mileage to the Gallon of Fuel and Water than any Other Steam Vehicle.

Reverse Lever Operated by the Foot.

Encased Engine. Automatic Lubrication.

Running Gear, New Design, Extra Heavy.

Two Double-Acting Brakes on Rear Hubs. No Strain on Compensating Gear. Large Fuel and Water Capacity.

Steam Air and Steam Water Pumps,

both operated from the seat.

Weight of Cars, 1250 lbs.

Write fer Catalogue and Agent's Proposition.

Prescott Automobile Mfg. Co. 83 Chambers St., New York City.

Century Gets New Blood.

Frederick H. Elliott, secretary of the Syracuse Automobile Club, and a young man of large means, has purchased a considerable interest in the Century Motor Vehicle Co., and will be elected its treasurer, succeeding Clark Tillinghast, who retires altogether owing to purely personal reasons.

Mr. Elliott will be actively interested and will have charge of the selling end of the business. He is clean cut, quietly energetic, and evidently the kind of a man who makes friends and keeps them.

It is understood that the scope of the company's business will be largely increased, plans tending toward that end being already under way.

The Century Motor Vehicle Co. was started and has been managed by William Van Wagoner, and numbers among its stockholders some of the most substantial citizens of Syracuse. Both steam and electric vehicles have been made, the former especially being a marked success. The policy pursued has been very conservative, though successful. It was decided, however, that the manufacture of automobiles could not be profitably conducted on any other than a large scale; hence the determination to take in new capital and to go ahead along larger lines.

That Mr. Elliott was quick to see and grasp the opportunity speaks well for ms judgment, for the Century company's prospects appear to be exceptionally bright.

Under the new order of things Mr. Van Wagoner will be left free to give his entire attention to manufacturing, and he is busily at work on the new gasolene car, mention of which was made in the Motor World some weeks ago.

It is probable that the electric vehicle will be dropped and steam and gasolene cars only be produced.

For Use as a Standard.

A good test of the running capabilities of the first Charron, Giradot & Voigt car to be brought to this country was made last week. The vehicle was shipped from Paris to this city, thence to Albany by boat, and from the latter point it was driven to Rome, the home of the Charron, Giradot & Voigt Co. of America.

Albany was left in the morning and a rather trying trip to Rome made. It came on to rain, and between Albany and Fonda some of the worst roads on the trip were encountered, the mud along the highways being axle deep in places.

The purpose of bringing the machine to Rome is to have it taken apart and the various sections of the apparatus studied by the men who are working upon the automobiles there, so that they may become schooled in setting up the first one they are making. It is expected that the new machine will be ready for operation inside a month. Sixty men are now employed on the various branches of work connected with the manufacture of the machines.

Both Steam and Gasolene.

The Puritan Motor Car Co., of Salem, Mass., is among the newcomers in the automobile field, and will market both steam and gasolene vehicles. A new touring car which the company is just bringing out has many novel features, and it is built on the most modern approved gasolene car lines.

The vehicle weighs about 1,000 pounds, carries 36 gallons of water and 16 gallons of gasolene, is equipped with 30-inch wood wheels and traction tires. It has aluminum fenders and a convertible front, so that either two or four people may be carried. An unusually heavy ball bearing engine is used. The machine is wheel steering, and has no levers whatever, foot throttle and foot reverse being used. Sight feed oilers are placed on the dasher.

Superheated steam is used, and a burner of new design is claimed to give unusually good results. The body is of steel, and in the construction of the carriage the well known Locke Regulator Co. fittings are used throughout.

Recent Incorporations.

Middletown, Conn.—Baker Mfg. Co., with \$10,000 capital, to manufacture, sell and deal in all kinds of motors, motor vehicles, boats, engines, tools and machinery. Incorporators, Joseph Merriam, Middletown; J. H. Hale, Glastonbury; Frank Brainard, Portland; T. M. Russell and L. O. Davis, Middletown, and E. H. Williams, Portland.

Trenton, N. J.—Munger Automobile Tire Co., with \$300,000 capital, to manufacture rubber tires. Incorporators, Louis De F. Munger, Ferdinand W. Roebling, A. R. Kuser, W. J. B. Stokes, Mahlon R. Margerum, J. O. Stokes, Franz Hill, Frederick Kuser, all of Trenton, and Thomas B. Hilliard.

Cleveland, O.—The Woodruff Automobile Co., with \$50,000 capital.

Richmond, Ind.—Brown-Darnell Co., with \$2,000 capital, to make and sell automobiles, bicycles, picture frames, mouldings, grills, fly screens and do oxidizing and repair work. Directors, Wesley Brown, Jon A. Spekenhier, John A. Walls, Fred M. Taft, Edward Valentine and John C. Darnell.

The Week's Exports.

Copenhagen—3 cases auto vehicles, \$1,630. Havre—33 cases auto machines, \$900. Hamburg—4 cases motor vehicles, \$2,550. London—15 cases motor vehicles and parts, \$9,800.

Mexico—2 cases motor vehicles, \$1,800. Philippines—14 cases motor vehicles and parts, \$20,950.

Southampton-2 cases motor vehicles, \$1,200.

Exide batteries are now being furnished with Waverley electric vehicles by the International Motor Car Co. when desired.

The Burlington Machine and Repair Co., of Burlington, Vt., has just completed its first automobile.

It was all a Mistake.

In addition to being famous for its oysters. Absecon, N. J., happens to be located directly on the highroad leading from Camden—just across the river from Philadelphia—to Atlantic City. Consequently it sees a great deal of automobiles—more than it likes to, to be perfectly plain. The smooth, level and usually clear road possesses a great temptation for automobilists whose cars have a nice turn of speed, and they frequently "hit it up" to their heart's content.

The restlessness aroused by this habitual speeding became accentuated last week when word came from Hammonton that a reckless party was approaching, after having run over a child.

Constable Thomas Hutchinson and other Absecon citizens who believed the time had come to put a stop to racing on the cross-State road planted a red flag in the middle of the highway and stationed a man down at the bridge to erect a hasty barrier of planks in case the automobilists should ignore the flag signal.

The news spread, and Absecon became excited. Crowds gathered and watched for the approach of the racing vehicles. A dispatch from Egg Harbor City, midway to Hammonton, in the mean time said that the machines had passed through there at whirlwind speed. When the racers came in sight of Absecon it looked as if nothing would stop their terrific progress, but when the red fing caught the attention of the men in the autos brakes were applied and the barrier at the bridge was rendered unnecessary,

When told that they were charged with colliding with a team at Hammonton and causing the serious injury of a child the members of the party disclaimed any knowledge of such an accident, and the order from Hammonton for their arrest was not complied with. The party took dinner at Absecon and started back up the road toward Hammonton early in the afternoon.

Four Days of Service.

Nearly 500 miles—482, to be exact—in four days is the excellent record made by one of the Fournier-Searchmont cars which participated in the Endurance Run on Saturday. In charge of Manager Bunting of the Wanamaker Philadelphia store it was driven from Philadelphia to New York on Thursday; on Friday it was sent over the Long Island course; on Saturday it repeated this performance, and on Sunday it was run back to Philadelphia in just a shade over six hours. Throughout the four days it behaved perfectly.

Air and Water Pumps.

THE UNION STEAM PUMP CO., BAT-TLE CREEK, MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.



Daimler Construction Methods.

It is now twelve years since motor work was first started at the factory of the Daimler Mfg. Co., at Long Island City, N. Y. In that time the works have grown from almost nothing to an imposing size, while the factory processes and the finished product have quite kept pace with this growth.

No one can go through the factory, as a Motor World representative did a short time ago, without being impressed by the tremendously thorough manner in which everything is done. Every process through which the product passes, from the raw material to the finished part, is characterized by this very evident desire to do everything just exactly as it should be done. The result is a collection of parts which, when assembled, make a harmonious and almost perfect working whole.

The Daimler Co. confine themselves entirely to business vehicles in their automobile department. For a long time they worked on the problem of turning out a thoroughly practical type, and made little or no effort to acquire a market for it until the experimental stage was well past. That time came some little while ago, and the success attending the vehicle now in use speaks volumes for the plan adopted.

If a business house is interested in the substitution of mechanically propelled for horse vehicles the Daimler firm is ready to send it a vehicle on trial. This vehicle is maintained for a week at the expense of the Daimler Co., and if at the end of that time the prospective purchaser desires a further demonstration it may obtain it by simply paying the expense of running the vehicle for a longer period. The plan has been found to work excellently, and in scarcely a single case has it failed of its object.

A good illustration of this is found in the experience of the United Light and Power Co., of this city. As was natural, the concern was disposed to favor electricity as a motive power, but the trial of a gasolene vehicle of the Daimler manufacture furnished such conclusive evidence of its worth that an order was placed for it without any great hegitation.

Cannon's new Steamer.

At the race meet of the Rhode Island Automobile Club at Narragansett Park, last autumn, the performance of the steam vehicle entered by George C. Cannon, a Harvard student, attracted much attention. In addition to winning first place in the steam class, the vehicle made a good fight in the sweepstakes, being beaten by the Winton only after leading for more than half the distance.

Its falling back then was due to the inability to supply the boiler with sufficient water. There were many special features about the vehicle, and the boiler was a great consumer of water; an auxiliary pump was made use of to supply it, but it finally gave out and the jig was up.

Since then Cannon, who is a son of the

president of the Chase National Bank, of this city, and an amateur mechanic of no mean ability, has been at work on another steam vehicle for use this year. He says he is dissatisfied with the vehicle that he built last year, and has purchased the necessary parts required in a powerful steam carriage.

A part of the outfit will be an asbestos coat and hood for the assistant, who will sit in the rear of the machine and work a gasoline pump. As the machine is to be fitted with a smokestack, this position will not be an enviable one. The new machine will be a racing affair, pure and simple, without consideration for comfort. It is expected to be the first steam carriage to cover a mile in better than a minute.

What They Must Do.

An idea of the performance which prize winners in the forthcoming trials of the German Government must give is obtained from a perusal of the most important requirements. These follow:

Ability to haul a load of 15,000 kilograms at an average speed of three miles an hour and to cover thirty-eight miles a day; no speed higher than five miles an hour shall be employed; machines must climb 20 per cent grades without trailers; to travel with loads over hilly or bad roads that can be travelled by horse drawn vehicles; must be fitted with reverse levers and two independent brakes; axles must be protected by springs; every operation of the truck must be possible from the seat, by one man, if necessary; protection against bad weather shall be required for all occupants; mechanism must be protected from dirt and water, yet easy accessibility is essential; the machine must be capable of travelling twentyfour hours without necessitating special attention or cleaning.

Prizes offered constructors are: First, 10.-000 marks; second, 5,000 marks; third, 2,000 marks. The demand is not so much for a truck intended to be loaded, as for a tractor intended to draw trailers.

Disagrees With Wydt.

Referring to the work of M. Wydt in the field of catalytic ignition, an English M. E. says:

"Catalytic action has neither the flexibility, the ignition capacity, the certainty nor the suitability of properly designed electric firing. When it is stated that incandescence is dependent on the concurrence of several factors, into which the charge composition and governing of the motor enter, and that the retardation or advancement of ignition are not nearly so perfectly controlled as with the electric current, enough has been said to indicate the weakness of the so-called new practice."

It is reported that a special gasolene vehicle is being constructed to be used as a 'bus between Lewistown, Mont., and nearby points.

ARE MADE IN FOUR DIFFERENT SIZES. They are adapted for recharging the batteries of

Electrio Automobiles. Electric Launches.

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Write for particulars and prices to

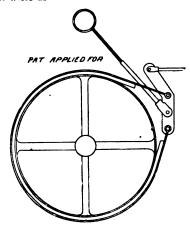
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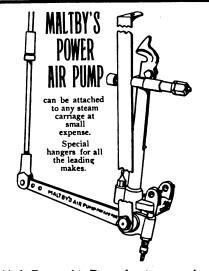
If you have this one you know it is.
The difference between thinking and knowing ought to be vital to you Better be sure than sorry. Better write us.



NEW JERSEY AUTOMOBILE CO..

8 Central Avenue,

NEWARK, N. J.



Maltby's Power Air Pump for steam carriages is guaranteed to do no injury whatever to the engine.

MALTBY AUTOMOBILE & MFG. CO.,

10 Clinton Street, Brooklyn, M. Y.



Just for Amusement.

Few people will care to dispute with a Santa Anna, Cal., automobilist the palm for striking novelty in the construction of his vehicle. It is propelled by springs, being wound up like a watch, the driving taking place as the springs unwind. There is said to be one huge spring and three smaller springs from which power is obtained. It usues no fuel, and all that is necessary to get it ready for the start is to work a lever which winds up the spring.

The Santa Anna man has made numerous excursions on country roads with his curious little machine, and has never had a breakdown. The entire machine weighs but 410 pounds, and it has attained a speed of 15 miles an hour on a level road. It is not good at hill climbing.

The machine will run under ordinary circumstances about 10 miles on one winding. The inventor does not claim that he has made any great discovery, and does not propose to build machines for the market. He built this one for his own use and amuse-

Dispenses With Porcelain.

Of Belgian manufacture is the "Steate" sparking plug, in which mineral steatite is used in place of porcelain. Among the advantages claimed for it are that after being baked in a furnace at a high temperature its mechanical and electrical resistance greatly increases, and is much in excess of that of porcelain. A new departure in connection with the plug is somewhat difficult to describe without an illustration. It may be said, however, that instead of the sparking taking place between two points it occurs between a central point and the edges of a small hole in a disk of nickel. The end of the screw threaded steel portion of the plug is ground flat, and on this is fixed a disk of nickel; a long rod passes through the centre of the plug and terminates flush with the disk, there being a space of from 1-32 to 1-16 inch between the conical point of the rod and the disk. It is claimed for the arrangement that small deposits of carbon will not interfere with the working of the plug, for if the current cannot find a passage from the end of the rod to the disk at one point it jumps across another. The plug is put together without any cement being used.

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to be distinctly better than anything else of the sort on the market, It will afford us pleasure to foward you details and price on request.

BEVIN BROS. MFG. CO., East Hampton, Conn.

Model No. 60. Price, \$800.

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MR. AUTOMOBILIST: Do you know that you are missing half the enjoyment of operating your machine if it is not fitted with this igniter?

Does away with worry about how long your batteries will last, the jerking caused by missing explosions, and you can make more miles Entirely enclosed, water and dirt-proof. with the same consumption of fuel. If you



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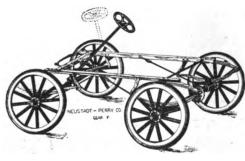
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WANTED—A first class foreman in an autobile factory. Must be capable of managing men and getting work through factory. The advertiser is delivering in quantities and wants a man for production, not for experimenting. State experience. M A. S. Co., care Motor World,

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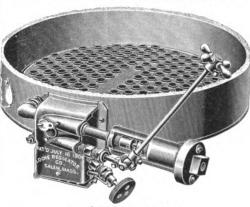
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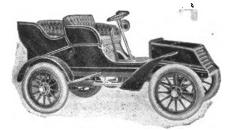
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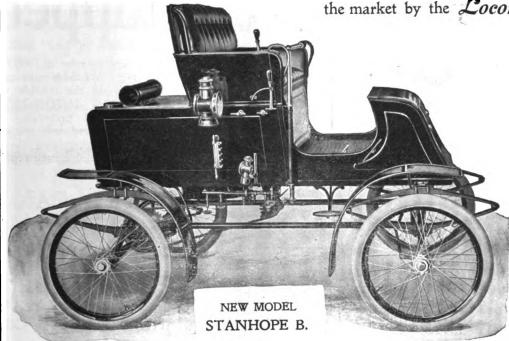
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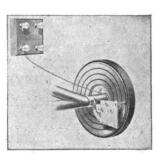
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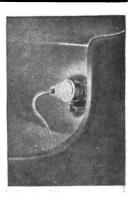
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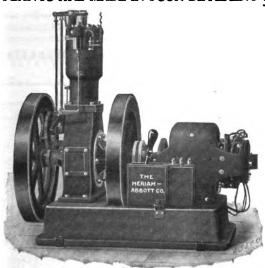
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Time, 1 minute 58 seconds,

proving it to be the fastest hill-climbing gasolene vehicle in the country weighing under 1700 pounds. Nearest competitor's time being two minutes twenty-nine seconds. It went the hundred miles without a stop and climbed all the hills on the high gear. The hill climbing gear was not used from start to finish. The gasolene used four gallons, three gills. Its great record on the hill was due to the fact that the grooved pins and the forced air system of cooling the engine made it impossible for the engine to over-heat and loose its power and speed.

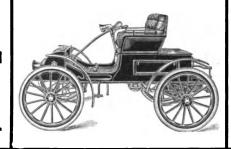
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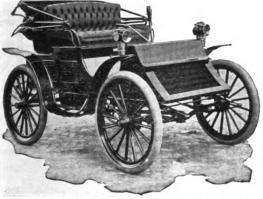
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SURREY-9 H. P., 36-in Wheels, 2000 Lbs., \$1800.



PHAETON-9 H. P., 36-in. Wheels, 1900 Lbs., \$1500.

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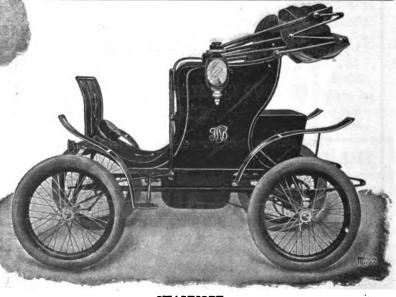
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STANHOPE.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, May 8, 1902.

No. 6

ECONOMY AWARDS

The Four Winners of the Long Island Consumption Contest—Minimum 3 1-6 Gals., Maximum 13 Gals.

Of great value, as relating to the first official consumption test held in this country, are the findings of the judges appointed to calculate the amount of gasolene used by the vehicles which participated in the enduranceance run of the Long Island Automobile Club on April 26.

It was optional with the operator or owner of each vehicle to take part in the contest. Only a comparatively small number of them did so, however; some were indifferent, others overlooked the matter. Consequently the club has decided to give out the result of the winners only in each of the four classes. These are as follows:

Class A-Steam.

No. Vehicle. H.P. Weight. Passeng's. Used Gallons. 12
Class C—Gasolene Under 1,000 Pounds. 72—Oldsmobile. 4 800 2 3 1-6
Class D—Gasolene Between 1,00 and 2,000

41-Knicker-

bocker.... 5 1,010 2 42-9

Class E—Gasolene Over 2,000 Pounds. 13—Panhard-Le-

vassor.... 16 2,600 4 18

Remarkably even is the running of the winners in Classes C and D. Their consumption in proportion to weight and horse power is almost identical. Nor is there much difference as regards the winner of the heavy gasolene class. The increased consumption of gasolene corresponds very closely to the increased weight and horse power.

The flerce, wind, which spoiled many a calculation as to the amount of fuel required to be carried by the steam vehicles, accounts for a great increase in fuel consumption. On an average day the showing would undoubtedly have been much better.

New A. A. A. Racing Rules.

New racing rules for the American Automobile Association are in the hands of the printer and will be issued in a very short time.

"A sub-committee was appointed at the organization meeting in Chicago last March," said Chairman W. J. Stewart, in reply to a question asked by the Motor World representative, "and it prepared a set of racing rules. These differ in a number of particulars from those in use by the Automobile Club of America, although the latter really form the basis for the set referred to. It is the idea to adopt the latter and use them for the present. Changes will be made from time to time, as experience suggests, and before the season is over it is expected that a very satisfactory set of rules will have been obtained."

Chairman Stewart also said that no action had been taken on the matter of charging a sanction fee, but that it would come up before long.

Absurd Buffalo Ordinance.

No opposition developed to a proposed speed ordinance at a hearing before the law committee of the Buffalo (N. Y.) Council last week; consequently the ordinance was passed, notwithstanding the fact that it put the legal rate at an absurd figure. The latter is seven miles an hour, one mile less than the ordinance so generally complained of in this city, and it applies to "all automobiles, bicycles and other vehicles, no matter how propelled."

Will Report Favorably.

An early adjournment of the Aldermanic Law and Legislation Committee meeting held on Tuesday alone prevented a favorable report being made on the ordinance increasing the legal rate of speed of automobiles, bicycles and street cars from eight to ten miles an hour. Its introducer, Alderman Oatman, states that favorable action will be taken on the measure next Tuesday.

According to returns from the consular districts for the quarter ending December 31, 1901, the export of automobiles to this country from Paris attained a value of \$83,942. The figures have just been published by the Washington authorities.

GOODYEAR WINS

Court of Appeals Reverses Decision in Favor of Kolly-Springfield Carriage Tire.

The sweeping victory won a short time ago by the Consolidated Rubber Tire Co. against the Goodyear Tire & Rubber Co. has been followed by an equally signal defeat. The United States Court of Appeals for Ohio has reversed the decision of the lower court, which upheld the validity of the well-known Grant patent, and thus dealt the latter a severe blow.

The Kelly-Springfield solid rubber vehicle tires are made under the Grant patent. The latter is a combination patent, covering the peculiar shape or formation of the tire, the longitudinal wires which hold it to the rim, and the chemical in the latter. It has been looked upon as their trump card by the Consolidated Co., and the adverse decision of the Court of Appeals is as unexpected as it is disagreeable.

The present decision appears to bring the litigation to an end, owing to the standing of the Court of Appeals which rendered it.

Against Imported Detachable Tires.

It has developed within the past week that an important move in the tire trade is about to be made. The G. & J. Tire Co. is almost ready to proceed against alleged infringers of its patents on the G. & J. type of detachable tire. Although details are not yet ready for publication, it is understood that the increase in the number of detachable tires of foreign manufacture is an important factor in the case. Proceedings aimed against importers or users of these tires will shortly be commenced, and it is expected that a vigorous campaign will be prosecuted.

To Go to Logansport.

The Rutenber Mfg. Co., of Chicago, manufacturers of gasolene motors, will shortly remove to Logansport, Ind.; attractive inducements have been offered them, including a location on a tract of land containing a quantity of fine moulding sand.

BLIND FRENZY OF THE AUTOPHOBES

The President of New York's Committee of Fifty as an Instance—Admits Existing Law Can't be Enforced but Opposes one That it Will be Possible to Obey—Talks of "Uprisings" and of "Sweeping Automobiles off the Roads."

It has passed into a proverb that adherents can be obtained for any cause, no matter how illogical or ill considered it may be. Names—names of weight in the community—of vast influence, financial, social or political, are always obtainable if it is gone about in the proper way to obtain them.

Out of the action of a local political club—actuated, it is asserted, by a desire to express dissatisfaction with the course of an office-holding member of the club—has grown what must be admitted to be the most formidable opposition yet developed to an improvement in the existing speed ordinances of this city. The club is the Twenty-seventh Assembly District Republican Club, the improvement referred to is the proposed increase in the legal rate of speed from eight to ten miles an hour, and the formidable opposition comes from a committee of fifty just appointed.

The names of the fifty are those of men of standing. Their reputation for judgment and level headedness is such that active participation in such a misguided, such an ill directed, movement as the present one would scarcely be expected from them. Yet their names are used, and used, so it is asserted, by authority.

Unlike the committee of the club referred to, the committee of fifty has its membership made up from the entire city. A firm of lawyers was retained by the club and directed to bring the committee into being. The work was well done, as the list will show:

Henry E. Howland, Gustav H. Schwab, Morris K. Jesup, J. Edward Simmons, Charles A. Schieren, William A. Nash, Cyrus Clark, John L. Brower, John Harsen Rhoades, Frederick B. Jennings, Harvey E. Fisk, Wheeler H. Peckham, Otto T. Banard, Vernon M. Davis, James Speyer, B. Aymar Sands, Albert Stickney, Robert Olyphant, Nathaniel A. Elsberg, John Henry Hammond, William G. Bates, Samuel P. Avery, Arthur von Briesen, James Talcott, William D. Murphy, Frank H. Partridge, Albert F. Hagar, Charles H. Russell, James W. Perry, Hugh D. Auchincloss, James G. Wentz, Walter G. Oakman, Charles R. Henderson, Isaac N. Seligman, Edward Van Ingen, James M. Varnum, James S. Lehmair, F. Norton Goddard, John A. Stewart, J. Van Vechten Olcott and Robert C. Morris.

J. Bayard Backus was elected chairman of the committee, and Horace E. Parker, of 100 Broadway, se retary.

A meeting of the executive committee of nine was slated to occur yesterday afternoon. So keen was the interest taken in it that just five gentlemen attended. It was really a flash in the pan. The five consisted of President Backus, Secretary Parker, J. L. Brower,

the indefatigable protester of the West End Association; Senator N. A. Elsberg, and Charles R. Henderson. The identity of the other four members is as yet shrouded in mystery.

For the purpose of ascertaining just what course of action was being mapped out by the committee a representative of The Motor World called on Secretary Parker yesterday afternoon, and found him engaged with President Backus just prior to a called meeting of the executive committee of nine which was being formed.

"What does the committee propose to do in the matter?" President Backus was asked after he had explained how the committee had been formed.

"We propose to fight any increase in the present legal rate of speed for vehicles," was the reply. "They go entirely too fast now."

"But isn't the present maximum, eight miles an hour, entirely too low? Isn't it habitually violated not only by automobiles, but by every vehicle that uses the streets of New York? Can such a limit be enforced?" he was asked.

"No. it is not enforced and can't be. That we will admit. But the trouble is this: The magistrates say they don't dare to convict a man for illegal speeding unless he is going two or three miles more than the legal limit. Now, if the limit is advanced two miles, the magistrates will have to advance their standard two miles; and instead of arresting automobilists for going ten or eleven miles an hour the police will wait until they go twelve or thirteen miles."

"But how do you know this? And why can't the police and the magistrates enforce a law that is reasonable and can be enforced?"

"Oh, it is impossible to have laws enforced here in New York," replied Mr. Backus.

"Then, why, if laws are not enforced, do you care whether the ordinance is ten miles, or fifteen or five? What difference does it make if none of them can be or are enforced?"

"There must be a limit somewhere," was the reply. "Automobiles go too fast now, and their operators are foul mouthed and abusive. Our lives and those of our women and children are not safe on the streets. You have to dodge for your life. Why, only the other day a man in an automobile cubsed me and wanted to know what I meant by standing in front of him."

"I tell you," Mr. Backus went on, "you have no idea how strong this feeling is against automobilists. If things go on the way they are there will be an uprising that

will sweep them off the streets. It is nonsense to inflict a fine on these people. They pay the fine, laugh and go ahead and break the law again. They ought to be imprisoned."

He was reminded that the Cocks law provides for imprisonment for the second of-

"But it leaves it optional with the magistrate whether he will fine or imprison. It ought to say that he must do the latter. No magistrate will take the responsibility of doing this, especially to rich men, unless he has to."

Mr. Backus was plainly very much in earnest and very much exercised over the matter. He expatiated on the personnel of the committee, spoke of the great weight its members had in the city's affairs, and hinted at the dreadful things that would be done if the proposed change in the ordinance was

"We will keep all automobiles off the street," he exclaimed.

Reminded that the automobile had its "Liberty bill" he replied:

"But the legislature can take that right away, and we will go to it and have this done"

Just when The Motor World man had begun to despair of this autophobe, he who regarded not ordinances—because they could not be enforced, or imprisonment laws because they were not mandatory—the committee's president struck a new vein.

"We are not opposed to the automobile," he said. "We do not want to set them back for twenty years. We know that they have come to stay—in fact, I expect to get one myself, but I shall behave decently with it. We are against all vehicles, as they all break the laws. The automobile is the most flagrant offender; that is why we bear so hardly on it. But our movement is one having for its concern the regulation of vehicle traffic. The streets belong to the pedestrians, and they should be able to use them with safety."

"Now, we are not opposed to a greater speed being permitted in the outlying districts. It is in the congested districts, in Fifth avenue and similar places, that we think the speed should be kept down."

He was reminded that this position agreed exactly with that of the great majority of automobilists, and that the present law required all such vehicles to proceed at a speed that was "reasonable and proper" at all

"But they don't do it," he exclaimed. "They go at twelve and fifteen miles an hour in Fifth avenue, and it is not right."

"Do you propose to try to have the ordi-(Continued on page 175.)



EIGHT CLASSES '

Including one for all Motor Vehicles to Participate in Record Contest.

Few and simple are the conditions governing the "Mile Record Contest," as it is officially termed, of the Automobile Club of America, which, together with the entry blank, have just been published by the Racing Committee, of which A. C. Bostwick is chairman.

The contest is to be held on the South Shore Boulevard (near Grant City), Staten Island, N. Y., at 11 a. m., Saturday, May 31. The exact starting and finishing marks will be decided upon to-day (Thursday), when the committee in charge will go to Staten Island for that purpose. Permission for the suspension of the speed limit has already been obtained, so that nothing now stands in the way of the contest. It has been decided that in case of rain on May 31 a postponement to Monday, June 2, will be taken.

The contest is open to eight classes of vehicles, including motor bicycles and tricycles and a free-for-all class, the latter being for motor vehicles of every class. Steam vehicles are placed in one class, as are electrics, while gasolenes are divided into three divisions, having regard to their weights.

The rules are as follows:

The contest will be held under the racing rules of the American Automobile Associa-

Entry blanks will be furnished upon application to the club secretary.

The time for receiving entries will expire on May 24, 1902.

The entrance fees will be as follows: For motor bleycles and tricycles, \$5 for each vehicle; for all other classes, \$10 for each vehicle.

The entrance fee must be paid to the treasurer of the club at the time application for entry is made.

The contest will be held on Saturday, May 31, weather permitting, or on the following Monday, June 2, should the weather on Sat-

urday prove unfavorable.
CLASSIFICATION: Vehicles shall be divided into eight classes, as follows:

Class 1. Motor bicycles, carrying one person.

Class 2. Motor tricycles.

Class 3. Gasolene vehicles under 1,000 lbs. Class 4. Gasolene vehicles 1,000 to 2,000 lbs.

Class 5. Gasolene vehicles over 2,000 lbs.

Class 6. Steam vehicles, all weights. Class 7. Electric vehicles, all weights.

Class 8.

Free for all, any weight, any power, against time.

Weight of vehicles to be taken in racing trim. Vehicles entered in Classes 3, 4 and 5 must report in racing trim at the clubhouse, Vehicles entered in Classes 3, 4 and 5 753 Fifth avenue, New York, on May 28, 29 or 30, between the hours of 10 a. m. and 5 p. m., so that they may be sent to the scales to have their official weight taken.

Vehicles with seats for two persons need carry only one person.

No manufacturer, agent or private owner will be allowed to enter more than three vehicles in any one class.

The course is one mile.

The contest will start promptly at 11 o'clock a. m.

No speeding of automobiles will be permitted prior to the contest, because of the danger of injury to people who are arriving on the course.

No horse drawn or motor vehicles, except those taking part in the contest and vehicles used by the Racing Committee, will be allowed on the course during the contest.

PRIZES: Silver medals will be awarded to the vehicles making the best time in the bicycle and tricycle classes.

Gold medals will be awarded to the vehicles making the best time in the gasolene, steam and electric classes.

Silver medals will be awarded to the vehicles making the second best time in the gasolene, steam and electric classes.

Bronze medals wil be awarded to the vehicles making the third best time in the gasolene, steam and electric classes.

In Class 8, free for all, no medals will be awarded. A certificate, however, stating the time will be given.

The new French timing device imported by the club and described elsewhere will be

Pennington Project Pricked.

Another automobile bubble has been pricked. This time it is one of the projects of the malodorous E. J. Pennington, who has during the past six or eight years "worked" two continents and transferred from the pockets of credulous investors thousands and thousands of dollars for "inventions" that were not worth a sou,

It was only a few months ago that the ubiquitous Pennington bought full and even double pages of advertising space in daily papers in this and other large cities for the purpose of exploiting his latest "scheme." The Pennsylvania Steam Vehicle Co. was the name of the concern, and it was to turn out automobiles by the thousand in much the same manner as an up to date machine turns out sausage. Purchasers of stock were to receive automobiles as bonuses, while at the same time being kept busy cutting coupons from their bonds and presenting them to be

Apparently, however, investors did not "bite" as well as was expected. The result is that the concern is out of business for good and all. W. J. Haerther, 512 Drexel Building, Philadelphia, has purchased the patents, machinery, leases, factory, etc., of the Pennsylvania Co. What he will do with his purchase it is not easy to say.

Against too Stringent Law.

At the annual meeting of the Buffalo Automobile Club held last week a committee was appointed to wait on the Committee on Ordinances of the Board of Aldermen and urge the aldermen to refrain from making any too stringent ordinances regarding the storage of gasolene. The present agitation against the indiscriminate storage of the explosive, used as a motor power of automobiles, was started by Fire Commissioner Grattan, who is the owner of a livery stable on Edward street. Next door to the livery stable was a dealer in gasolene, who, since the agitation started, has been required to move elsewhere.

ASSOCIATION ACTS

And Resolves to Disqualify Speed Law Breakers in all Future Contests.

In the week or more that has elapsed since the Endurance Run of the Long Island Automobile Club the feeling against the automobilists who indulged in infractions of the rule governing speed has not undergone any material diminution. It has, however, crystallized into a feeling that nothing beyond disapproval can be done, as far as the event referred to is concerned, but that in future contests steps will be taken to see that there is no repetition of the offences.

With that end in view the Board of Directors of the American Automobile Association, at its meeting held on Tuesday afternoon, passed the following resolutions:

"Resolved, That any driver, owner, nominator or manufacturer of any motor vehicle who shall be disqualified or suspended by any club belonging to the American Automobile Association shall be disqualified or suspended by this association and prevented from taking part or participating in any event held by any club belonging to this association until such time as the club disqualifying or suspending such person or persons shall see fit to revoke such disqualification or suspension.

'Resolved, That the name of any person or persons so disqualified or suspended shall be sent by the club disqualifying or suspending such person or persons to the secretary of the American Automobile Association, and shall by him be sent to each club belonging to the association.

"These resolutions are to take effect immediately upon their passage."

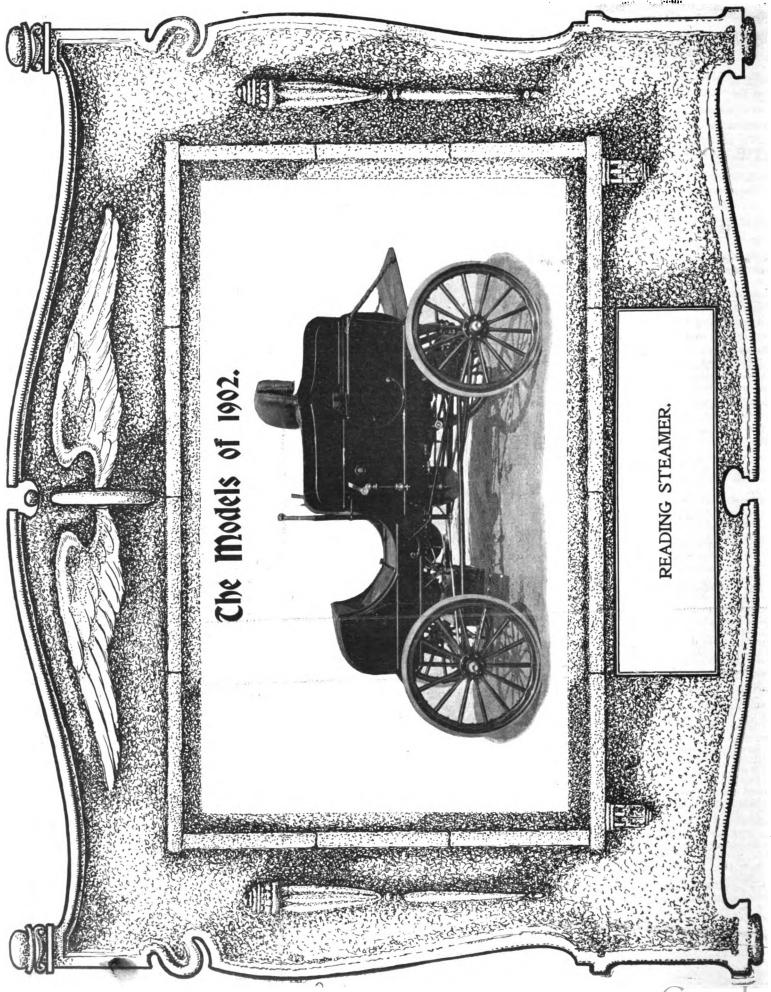
"Of course, these resolutions cannot be invested with a retroactive character," said A. R. Pardington, of the Long Island Club, in reply to a question put to him by the Motor World representative. "They can only have bearing on future contests. But you may rest assured that precautions will be taken on May 30, and that especial efforts will be made to see that the offenders in our event will not repeat their action there."

Centaur's Wings are Clipped.

But little surprise will be caused by the announcement that William C. White has been appointed receiver of the assets of the New Centaur Publishing Co., publisher of the New Centaur, at the Park Row Building. 19 Park Row, by Judge Bischoff of the Supreme Court, on the application of the Trow Directory Printing and Booksinding Co., a creditor for \$3,243 for printing. Only two numbers of the magazine, the March and April numbers, were issued. The company was incorporated on October 11, 1901, with a capital stock of \$125,000. The cash capital of \$8,500 has been entirely exhausted, and the company is in no condition to continue the business. The liabilities are \$7,243 and assets about \$1,800.

William E. Kibbe has opened an automobile station at 1,124 Main street, Hartford, Conn.





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The Motor World.



Published Every Thursday

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To Facilitate Matters Our Patrons Should
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Entered as second-class matter at the New York, N. Y. Post Office, November, 1900.

NEW YORK, MAY 8, 1902.

For an Honest Law.

It is easy to understand the attitude of the yellow journals toward automobiles. They appeal to what they delight to term the "common people." Their keynote is sensations at any price. The automobile has been made to appear, the conveyance of the wealthy and aristocratic. If the common people—that is, the masses—can be aroused against the classes, the "yellows" mission is accomplished and their joy complete.

It is not so easy, however, to appreciate the activity of some others who have thrown themselves into the anti-automobile agitation which has attained some volume in this city and vicinity. The lawyers who have brought themselves into the limelight are of the number. The ethics of the legal profession forbid its members to pay for advertising. To get themselves before the public, or to keep themselves there, other means are necessary. It may be unfair to make the inference with-

out qualification, but it is nevertheless interesting and apparently a significant coincidence that in the forefront of nearly all the anti-automobile agitations, lawyers tower head and shoulders above all others. In the Committee of Fifty, which has just been formed in this city, particulars of which are detailed in another column, the organization is top-heavy with legal weight. The men apparently responsible for its being and for getting together what none can deny is a really representative committee of citizens, are lawyers of limited fame. Perforce the advertising they are securing must cause cause them to chortle in their sleeves. This, however, is not the point of our contention.

It is the illogic of the autophobes; it is their sophistry that stands out most distinctly. President Backus, of the Committee of Fifty, is no exception to the rule. He is opposed to increasing the limit of speed from eight to ten miles per hour. In the same breath he acknowledges that it is impossible to enforce the eight-mile limit, and that it is impossible, and will be impossible, to enforce the limits of eight, ten or any other speed. He undertakes to speak for the city magistrates, and in doing so places them in a peculiar light. But this is merely incidental to the subject matter, and need not enter into it.

The trouble with most laws is that they are unreasonable; too many of them are utterly impossible. The eight-mile limit is almost within the latter catagory; certainly it is within the former.

Despte the fact, and despite their admissions, the opponents of proposed laws that it would be possible to obey, attempt to block their passage. Their reasons are unworthy of them.

The Motor World favors no undue speed, but it pleads for an honest law, for one that is both reasonable and possible, and that can be and should be enforced. The Oatman ordinance, extending the speed to ten miles, is a law of this nature. Because it is honest, because it is reasonable, because it is possible, because it can be obeyed, because it is not a law made only to be broken, it deserves to pass; we care not who may oppose it, or what weight may be brought to bear against it. It may be defeated, but its defeat will not alter the situation for the better. Eight miles per hour is simply a premium on infractions-a limit made only to be broken, and expected to be broken, as even its frenzied advocates admit.

A Certain Solution.

It has become plain that in the running of motor vehicle contests there are two classes of entrants who are likely to give trouble when it comes to the enforcement of speed regulations.

The first of these is the class which, in the pursuit of either notoriety or sport—or both—ignores not only the rules and regulations of the contest, but public ordinances or laws, and flaunts its utter disregard of public opinion in the face of people only too eager to bring repressive measures to bear. But as the disregard of decency is open and flagrant, so are the means of putting a stop to it or of nullifying the efforts to seek advertising exploitation near at hand.

It is the second class which is really the more difficult to deal with. It trangresses innocently, through ignorance or miscalculation. Certainly it has no intention of defiantly disregarding speed limits set for it to observe.

This being so, it is desirable, perhaps even necessary, to put it out of the power of contestants of this class to go astray.

Not only should they be made to understand that there is a speed which must not be exceeded, but means should be provided which will effectually prevent their doing this.

It is difficult, at times impossible, to gauge speed accurately, they will say. Even familiarity with the road is not sufficient to enable one to do this. The pace always seems to be slower than it really is, and the control or destination is reached considerably in advance of the estimated time.

This is quite true—just as true, by the way, as is the remark that a certain way to make sure of not getting in too soon is by making calculations to arrive a little late.

As a perfect record would be obtained even if the vehicle is an hour—or two or three of them—late, such a solution of the problem has obvious advantages. But it is too easy a solution. A considerable number of contestants will always disdain to make use of it.

But it is very evident that it is along these lines the solution must be sought.

To make assurance doubly sure it is only necessary to follow some such plan as we suggested more than a month ago in reviewing the contests then approaching:

"Contestants would be greatly helped if the maps or routes supplied them should have marked against the controls or important points passed through, say, every five



The Motor World.

or ten miles, as nearly as possible, both the distance and the shortest time in which the point can be reached.

"This would not be as difficult as it appears at first sight. Taking the appointed starting hour as a basis, the various times could be plotted on the diagrams. Then it would only be necessary for each contestant to learn how much after the hour he started and add that number of minutes to the time designated on the chart."

With a schedule of this sort to follow, no operator or observer could go astray innocently.

Do one Thing or the Other.

It appears to be rather difficult to satisfy the average automobilephobe. Possibly if a few dozen motor vehicle users were hung, drawn and quartered for the especial delectation of him and his kind he would be appeased. But nothing short of this apparently will convince him that the measures to repress excessive speeding are being carried out.

When the Cocks bill in this State was introduced at Albany last winter it was opposed in the strongest possible manner by automobilists. It was the misdemeanor clause which was most fiercely assailed. It was bad enough to be subject to the petty persecution of ignorant or prejudiced ofcials. But to be liable to imprisonment, and this almost without redress, was a matter the seriousness of which could scarcely be exaggerated.

Despite the most strenuous efforts to have the obnoxious clause stricken out, however, ti became a law along with the bill.

It puts a weapon in the hand of any mot rphobe who choses to use it. Policemen, magistrates, judges—any or all of them have it in their power to inaugurate a veritable reign of terror. Under pretence of enforcing the law they can jail a large number of automobilists and thrust upon them the burden of proving their innocence.

As it is now, a majority of the trials in the magistrates' courts are the veriest farces.

The word of the most reputable citizen, if he happens to have the misfortune to be an automobilist as well, is worthless—in fact, it is worse than this, for the more he protests his innocence the worse he makes his case.

The policeman's evidence will be accepted as against his without the slightest hesitation. No statement of the former will be regarded as too absurd to receive credence. The accused is judged as soon as accused,

and the only reason he is brought to the bar of justice is in order that he may receive sentence.

It is this prejudging of the cases that is, more than all other causes combined, responsible for the hesitation of the magistrates to impose the maximum penalties.

They, or many of them, go on the principle of hitting a head wherever they see it, providing it happens to belong to an automobilist. The merits of that particular case does not enter into the matter at all. Consequently extreme measures—such as sending a man to prison—are seldom or never resorted to.

But this state of affairs cannot last indefinitely.

The magistrates or other officers of jus-

Cold Facts for Hot Heads.

ONE MILE.

Automobile—Present legal rate of speed in city, 7 minutes 30 seconds.

Walking—W. Perkins, London, England, June 1, 1874, 6 minutes 23 seconds.

Running—W. G. George, London, England, August 23, 1886, 4 minutes 12 seconds.

EIGHT MILES.

Automobile—Limited to one hour by law. Walking—John Meagher, New York City, November 29, 1882, 58 minutes 37 seconds.

Running—J. Howitt, London, England, June 1, 1852, 40 minutes 20 seconds.

ONE HOUR.

Automobile—Present legal rate of speed in city, 8 miles.

Walking-John Meagher, New York City, November 29, 1882, 8 miles 302 yards.

Running—Fred E. Bacon, Rochdale, England, June 19, 1897, 11 miles 1,243 yards.

tice are certain, sooner or later, to be placed in the unpleasant predicament of having to yield to the pressure brought to bear on them

Either they will bow to the cry of the shotgun advocate and visit upon the accused the extreme penalty, or they will give heed to the indignant protests of motor vehicle users who are being persecuted. Whichever way they turn they will be sore pressed.

But it is much to be hoped that something will be done soon. The reckless automobilist, who habitually drives his vehicle to the danger of life and limb, deserves punischment—even imprisonment. There is the remedy right at hand. Let is be used.

On the other hand, the law abiding automobilist has a right to the use of the streets and roads under the law. He should not be terrorized, as he is at present.

Was a Valuable Lesson.

As a result of the stopping tests made last week under the auspices of the Automobile Club of America, some exceedingly valuable data have become available.

It would be going a little too far to say that the test was entirely successful. The performance of the vehicles was too irregular for that, and the work of the horse drawn vehicles ran some of the automobiles uncomfortably close. The fact that the latter were superbly handled probably accounts for their good showing.

But if there were some mediocre—even bad—performances on the part of the automobiles, the average was still remarkably good. Furthermore, a considerable majority of them did well, and a number of them are deserving of the highest possible praise.

To particularize, it may be said that at the slower speeds the results were exceedingly remarkable. The feat of stopping in a vehicle's length was accomplished and discounted again and again. Going at 6.9 miles per hour, one vehicle was stopped in 3 feet 10 inches. And several others pressed it hard. Both the light and the heavy vehicles excelled here.

When the rate of speed was materially increased the difficulty of stopping quickly increased more than proportionately.

It was found that doubling the speed more than doubled the distance required in order to come to a dead stop. This, too, notwithstanding the fact that in most cases the wheels were locked and the vehicles skidded for yards in spite of the great resistance between the roadbed and the pneumatic tires.

Brakes, tires and the vehicles as a whole withstood the immense strain put upon them by this violent checking of speed in a gratifying manner. Especially is this true of the brakes. They held and were found to be dependable.

One other thing the test accomplished: It laid bare in all its absurdity the present eight-mile speed limit.

No one could watch the slow moving vehicles when going at this speed without being moved to mirth. In one case a bystander accompanied a vehicle at a slow jog trot, engaged in casual conversation with the operator. He could, without much inconvenience, have added 50 per cent to his speed rate, or doubled it if need arose.

A single concern has a list of 1,410 places in England where its gasolene may be obtained.



QUICK STOPS FOR ALDERMANIC ENLIGHTMENT

Automobile Club Holds a Private Matinee on Riverside Drive—Automobiles, Bicycles and Four-in-Hands Participate—Results Effective but not Conclusive.

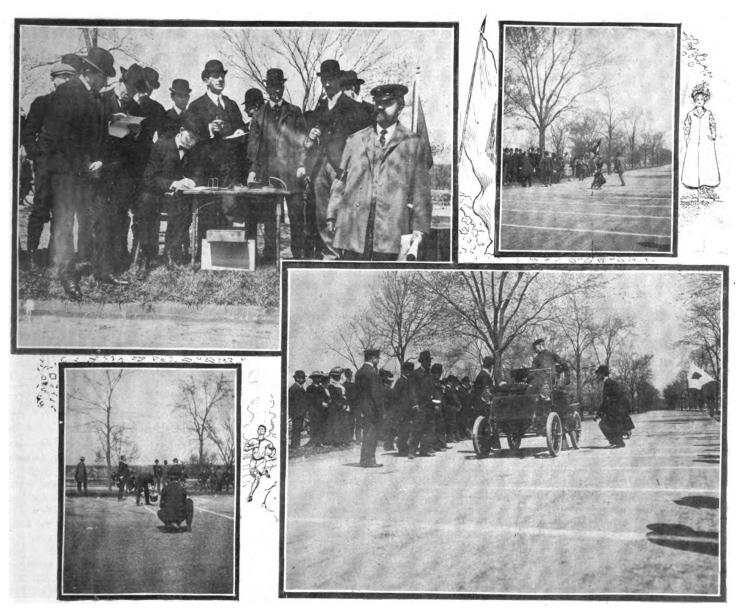
Results varying from fair to excellent were obtained from the stopping test conducted by the Automobile Club of America on Riverside Drive, this city, on Thursday of last week.

The test was held for the purpose of convincing the aldermen, some half dozen of

fectually demonstrated; the second left something to be desired, especially when horse drawn vehicles traveling at, for them, high rates of speed were in question.

Another point, and one not on the programme, was settled at the same time. It was made quite plain that it was absurd to

Although conducted with a sort of semisecrecy, about a couple of hundred more or less interested persons assembled at One Hundred and Ninth street and Riverside Drive to witness the test. The Automobile Club of America obtained permission from the Park Department to hold it, and sent



SCENES DURING THE TEST.

whom were present by invitation, and other interested persons that a speed of ten miles an hour, as proposed by the amended ordinance now before the municipal assembly, is an entirely reasonable one for automobiles in competent hands. It was also intended to demonstrate that motor vehicles could be more quickly stopped than could horse drawn vehicles. The first of these was ef-

place the maximum speed for either motor or horse driven vehicles at eight miles an hour. The farcical nature of this limit was made manifest.

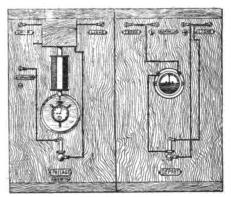
As one policeman remarked, "This proves that there are no vehicles in the city of New York which obey the law. I can arrest any vehicle user, knowing that he never uses the streets that he does not go too fast," out invitations to the aldermen and others they desired to have attend. Of the former Messrs. Matthews, Oatman, Meyers, Behman, Goldwater, Duell and Whittaker were present. Interested spectators were Lewis Nixon, the Tammany leader, and President Cromwell of Richmond Borough. The Automobile Club was represented by President Shattuck, George F. Chamberlain, Winthrop



E. Scarritt, Dr. S. S. Wheeler and Secretary S. M. Butler.' The photographers' brigade—a round baker's dozen in number—added variety to the gathering.

The event had been carefully planned. A course one-tenth of a mile in length had been laid out, and at the finishing end lines at intervals of five feet marked out. A French timing machine had been brought over, and was given its christening on that day. The sketch and the accompanying description will explain the working of the machine.

At the starting point a mechanism for holding a timing watch was placed. One timer stationed there pressed a knob which started the watch by actuating a lever, and at the same time started a second watch which was located at the finishing point. When the contesting vehicle reached that point the timer stationed there stopped his watch in the usual manner. This gave the time between the two points, the distance between them having been previously measured. A table had been made showing the time it would take to cover this distance at



THE FRENCH TIMING APPARATUS.

various rates of speed. It was easy, therefore, to tell whether the vehicle was coming at the proper speed, and if this was not the case it was sent back for another trial, the operator being given a brass check to show that he was to try again.

Three classes of vehicles took part in the test. They were automobiles—more than a dozen of them—horse drawn vehicles—a coach and four and a victoria—and four bicycles.

In each case they were required to come down to the line and proceed until they received a signal to apply brakes or stop in other ways. This signal was given by an official who had a French horn under his arm, which he squeezed whenever the spirit moved him. It was impossible to get warning of his signal. The sound came almost simultaneously with the movement of his arm. Consequently the operators of the vehicles were taken unawares, and the conditions of a quick stop on a crowded street were obtained; or perhaps a little worse, as in the latter case some indication of the cause of a stop is usually given.

The bicycle stops were of a farcical nature. One policeman—about the most sensible of the lot—jumped off at the signal. The others, being minus brakes, applied their feet to

the front tire. At 9.4 miles per hour one of them stopped in 8 feet, while another going at 20 miles took 60 feet to stop.

The victoria stopped in 17 feet while going at 9 miles an hour, and more than doubled this when the speed was increased to 13.8 miles, the distance run being 36 feet 10 inches. The four-in-hand was the star of the day, viewed spectacularly, and its performance was really fine. The way the horses, especially the wheelehs, were drawn on their haunches and literally dragged along for yards, was rather harrowing. The S. P. C. A. might find occasion to stop a repetition of the performance. The three stops came out as follows:

Miles	Miles Stop		
per hour.	Feet.	Inches.	
9.0	25	111/2	
16.5	77	6	
18.9	90	10	

The work of the motor vehicles was rather uneven.

At the slowest speeds the best stops were made by the Panhard, with a stop in 3 feet

10 inches when at a tate of speed of 6.9 miles an hour; the Toledo, with a stop in 4 feet 9½ inches at a rate of speed of 7.6 miles an hour; the Peugeot, with a stop in 4 feet 2 inches at a rate of 6.4 miles an hour, and the Locomobile, with a stop in 5 feet 9 inches at a rate of 7.9 miles an hour.

At the medium speed a Gasmobile travelling at 15 miles an hour stopped within 22 feet 4½ inches; a Panhard, going at 16.3 miles an hour, did it in 25 feet 4½ inches; a Long Distance, with a 15.6 mile pace, was brouht to in 25 feet 11½ inches; a Locomobile, at a 16.3 pace, stopped in 30 feet 9 inches, and a Gasmobile, at a 14.4 mile gait, was slowed down in only 21 feet 7 inches.

At the highest speed a Gasmobile, travelling at 20 miles an hour, was brought to a standstill in 34 feet 11½ inches; a Panhard, at 18.9 miles, in 34 feet 6 inches; a Toledo and an Autocar, both travelling at 20 miles, in 45 feet 8 inches each, and a Locomobile, going at 22.5 miles an hour, in 51 feet.

The complete record of the motor vehicles is as follows:

	Weight,	Miles	Stopp	
Owner and vehicle.	pounds.	per hour.	Feet. I	
R. M. Owen (Gasmobile)		8.7	8	9
R. M. Owen (Gasmobile)	. 800	14.4	21	7
R. M. Owen (Gasmobile)		20.0	. 60	6
R. M. Owen (Gasmobile)	. 800	20.0	58	6
G. N. Pierce Company (Pierce)	. 650	15.6	33	81/2
P. H. Deming (White)		7.5	6	91/2
P. H. Deming (White)		15.0	31	0
P. H. Deming (White)		21.1	75	2
Locomobile Company of America (Locomobile)	1,000	7.8	5	9
Locomobile Company of America (Locomobile)	. 1,000	16.3	30	9
Locomobile Company of America (Locomobile)		22.5	51	5
Locomobile Company of America (Locomobile)		32.5	139	0
Autocar Company (Autocar)		8.0	9	10
Autocar Company (Autocar)		14.4	31	8
Autocar Company (Autocar)	. 1,050	20.0	45	8
International M. E. Co. (Toledo)	. 1,400	7.6	4	91/2
International M. E. Co. (Toledo)	. 1,400	16.3	34	0
International M. E. Co. (Toledo)	. 1,400	20.0	45	8
International M. E. Co. (Toledo)	. 1,400	27.6	122	1
J. D. Proctor-Smith (Panhard)	. 2,000	6.9	3	10
J. D. Proctor-Smith (Panhard)	. 2,000	16.3	25	41/2
J. D. Proctor-Smith (Panhard)	. 2 ,000	18.9	34	6
J. D. Proctor-Smith (Panhard)	. 2,000	25.7	89	. 7
Automobile Company of America (Gasmobile)	. 2,100	6.7	5	3
Automobile Company of America (Gasmobile)	. 2,100	15.0	22	41/2
Automobile Company of America (Gasmobile)	. 2,100	20.0	34	111/6
Automobile Company of America (Gasmobile)	. 2.100	27.6	114	7
E. T. Kimball (Peugeot)	. 1,920	6.4	4	2
E. T. Kimball (Peugeot)		15.6	40	10
A. I., McMurtry (Packard)	. 2.500	7.2	6	8
A. L. McMurtry (Packard)		13.3	26	7
H. V. R. Kennedy (Mors)		22.5	75	9
H. V. R. Kennedy (Mors)		30.0	123	8
Lewis Nixon (Long Distance)		4.5	4	6
Lewis Nixon (Long Distance)		15.6	25	111/2
Lewis Nixon (Long Distance)		18.9	29	2
Lewis Nixon (Long Distance)		21.1	60	41/2
B. M. Young (Friedman)		6.9	7	ō′²
B. M. Young (Friedman)		8.3	10	21/4
B. M. Young (Friedman)		17.1	57	97
H. S. Chapin (Haynes-Apperson)		4.5	4	6
H. S. Chapin (Haynes-Apperson)		16.3	36	8
Dr. S. S. Wheeler (Riker)		11.2	43	5
	,,			•

Rain and Mud Conquered

This time it was the rain and the mud which prevented the much exploited race between W. K. Vanderbilt, jr., and the Baron Henri de Rothschild from taking place on the Chartres road last week. The American solaced himself by covering some fast kilometres, his best one being 32 2-5. Rothschild

took 1-5 second longer to cover the distance, and D. W. Bishop 1-5 second longer than Rothschild. The times, although cabled as records, are much outside of the recent Serpollet kilometre, which was done in 29 4-5.

Wilson, Levy & Co., a new Toledo (Ohio) firm, have taken the agency for the Oldsmobile in that city.



WOULD HANG THEM

Such is the Wish of one Frenchman—Some Features of new Vehicles.

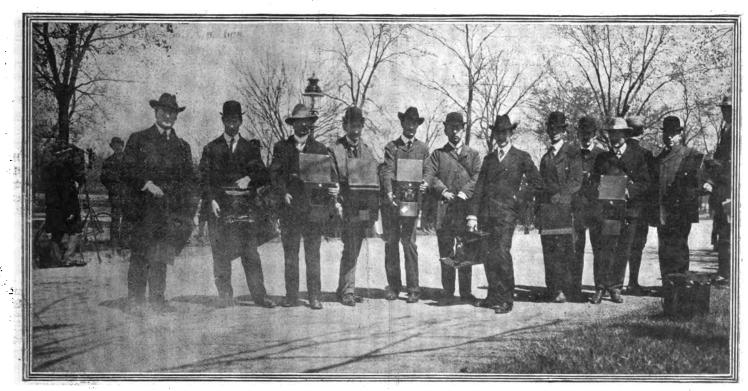
French Bureau Motor World, 2 Rue d'Abbeville.

Paris, April 25.—If those clever people who object to racing happened to visit Nice last week it is possible that what they saw there would have modified their views concerning the value of speed tests. On the other hand, it might have done nothing of the kind, for a prejudice against racing implies an ignorance of the conditions of the automobile

would find this side of the Equator. It is simply the Marseilles way of saying they don't like automobilists. But every one in Marseilles is evidently not of this mind, for, judging from the number and size of the storage depots and the vitality of the manufacturing industry, the city must be a very active centre of automobilism.

To understand the value of racing and the influence it has upon the designing of vehicles it was only necessary to see the splendid lot of new carriages that were sent down to Nice in view of the Abbazia race. It is true that the prohibition of the race prevented their being tested over a long distance, but what they did in the short sprints

senting the biggest advance yet made in automobile construction, are the Mercedes turned out from the Cannstatt works. So silent are these vehicles that to hear them running you could almost fancy they were electric carriages. The most notable thing about them is the simplicity of the engine. There is nothing superfluous in the motor, and every part is simple and positive in action. Both the induction and exhaust valves are operated mechanically, or rather the induction is governed by the well known Mercedes tubular form of regulator, and the same cam shaft actuates the exhaust valves, so that as they are both timed in the same way the burnt gases escape with much less resistance than by the ordinary system, with



THE ARMY OF PHOTOGRAPHERS AT RIVERSIDE DRIVE TESTS.

industry which is proof against conviction. To them there is not much difference between one automobile and another, except that some may be a little less ugly and a little less noisy; but they are all equally devised for the gradual extinction of the human race, and the sooner the other sort of race is suppressed the better it will be for the world at large.

In the South of France convictions are very strong on automobilism, as on every other matter, and a man is either a perfervid enthusiast or an out and out pessimist. Exaggeration is the typical characteristic of the Marseilles man. And while on our way to Nice we had the advantage of hearing the views of one of these gentlemen, who expressed the wish that he could hang every automobilist, and if he did, humanity, he said, would still enormously gain thereby, for every automobilist kined at least two persons; and he was probably about as mild

proved that they are surprisingly fast, and any one with a knowledge of mechanics could see that they were not only speedy, but thoroughly reliable and durable.

At first it was supposed that the makers would never succeed in augmenting the power, and therefore increasing the speed, of their vehicles within the limit of 2,200 pounds fixed for racing carriages. But the word impossible does not exist in the automobile vocabulary, and the wisdom of the new weight limit is seen in the stimulus it has given to the ingenuity of makers, who have far exceeded expectations in the way of turning out light and fast carriages.

The Nice meeting was a revelation in many ways. We had heard plenty about the new cars and what was being done in the reducing of weight, but we had hardly looked for such a considerable improvement as was seen in some of the vehicles present. By far the most interesting, because repre-

the result that the motor is extremely silent. The engine is of the four-cylinder type, and is rated at 40 horsepower.

Another thing about these new vehicles is the progressive action of the friction clutch, which allows of the speed being changed without putting the motor out of gear. Generally it is not required to use the change speed lever at all, except when big gradients are met with, for one of the most curious things about the Mercedes-Simplex, as the new vehicles are called, is the elasticity of the motor, which allows of the carriage running between the highest and lowest speeds by simply advancing and retarding ignition.

The wheel base has a length of eight feet, which is got by extending the side members of the underframe to beyond the front of the vehicle, so that the springs can be carried forward to bring the axle under the end of the carriage. The wheels run on ball bearings, and all the working parts are in

oil, including the spring of the friction clutch. Water also circulates around the band brake on the differential. Another innovation on the Mercedes-Simplex is the fearful ear-splitting siren, which fairly shrieks, and ought to be very effective in clearing the way for racing vehicles; but if this device gets adopted on touring carriages it will add another terror to existence.

After seeing the Mercedes-Simplex one might almost be tempted to say that we are getting very near to perfection in the designing of automobiles, or at all events the Cannstatt firm have certainly pointed out the way in which something like perfection may be obtained in a very simple and practical manner; but it is characteristic of the automobile industry that as soon as we get one good thing some one else is bound to go better, and doubtless there are many other ways of improving and simplifying the motor vehicle. The Mercedes-Simplex have become very papular, and several well known automobilists have now taken to these carriages. All those that were down at Nice have found purchasers, mostly among Americans and English, including Mr. W. K. Vanderbilt and Mr. Bishop, the former having tried his vehicle over the record course in the Parc d'Acheres, near Paris, when he is reported to have unofficially covered the flying kilometre in 28 seconds. He has now entered his Mercedes-Simplex for the alcohol race which is being organized by the Minister of Agriculture and will be held next month.

A NEW MERCEDES COMBINATION.

The Mercedes was also present at Nice in another form, with electric transmission upon the system devised by Messrs. Lohner and Porsche, of Vienna. The Mercedes-Lohner is of exactly the same type as the ordinary Mercedes, so far as concerns the carriage and the engine, which only develops 28 horsepower, but it is propelled by electrical energy generated by a dynamo on the clutch shaft, so that it is only running when the motor is put in gear. The current is conveyed directly to electric motors on the front wheels without the employment of any storage battery, but we are told that in some of the carriages a small battery is used for starting the gasolene motor, though it does not form an essential part of the system. There are resistances to get fifteen changes of speed.

The transmission is therefore as simple as it is possible to make it electrically, and it is, of course, claimed that it results in more economy of power than mechanical transmissions, but, after all, it may be questioned whether this claim is really justified, for it would seem that with a dynamo and two electric motors there would be almost as much loss as with ordinary gearing. Again, it may be asked whether any small advantage on this score would compensate for the trouble that might be experienced by the average owner, who knows little or nothing of electrical matters. The merits of the vehicle, however, can only be proved in practice, and meanwhile it can certainly be said in its favor that the Mercedes-Lohner is very silent in running and can be driven at any speed with the greatest facility, in the same way in fact as an electric vehicle.

The new Panhard vehicles unfortunately did not show up prominently at the Nice meeting. They went down to take part in the race to Abbazia, and on this being suppressed they returned, leaving the field free for the Mercedes. There is thus no line to go by in estimating the speed qualities of the French and German vehicles. We got in touch with the Panhards as they were being driven down to Nice when we met four of them, two of the forty horsepower vehicles driven by Chevalier René de Knyff and M. Pinson, and two of the light carriages of the Paris-Berlin type, piloted by Messrs. Berteaux and Jarrott.

The big vehicles were constructed specially for the Abbazia race, and here again we see a striving after simplicity, which has been rendered necessary by the weight limitation. By comparison with the older Panhards the carriages have a very light appearance, not only in the mechanism, but more especially in the carriage work and the underframe, the chief feature being the adoption of a transversal front spring upon the American system, which allows of the axle being brought under the end of the frame, at the same time, of course, that it gives freer play to the wheels and prevents the lateral movements of the axle from being communicated to the carriage body. As the firm have entered a dozen vehicles in the forthcoming alcohol race, we shall soon have an opportunity of seeing what they are capable of do-

NEW FIRM MAKING A NAME.

A firm who are rapidly making a name for themselves are Turcat Mery et Cie, of Marseilles, who had a lot of very finely constructed light carriages at Nice, and their experience shows what can be done by manufacturers who carefully follow the latest development of automobile construction and aim at producing something thoroughly simple and practical. Their new vehicles very closely follow the principles of the Panhard and Mercedes design, with the four cylinders in a line and all the mechanism reduced to the greatest possible simplicity. With a motor developing fifteen horsepower this little carriage is remarkably fast, and, what is more, is very quiet and of great elasticity, and, having tried it at Nice, it certainly seems to us to be one of the speediest and most reliable of the kind turned out.

Among the other light carriages the biggest show was made by Darracq, who made a big splash with his new twenty horsepower vehicles and came out of the mile competition and hill climbing race with flying colors. The Decauvilles were also to the fore, and secured the record for La Turble on the day after the race, when the conditions were more favorable for fast times; but, though these racing vehicles are very fast, it must be confessed that their noisiness was decidedly marked beside the silent running

Mercedes. The Mercedes-Simplex have set a standard in silence which must be attained by all other vehicles if they would keep up with the times. By far the most powerful vehicle at Nice was the sixty horsepower gasolene carriage of Jenatzy, who had the same motor he employed on his gasolene-electric automobile, though in his new carriage he had a shaft transmission. The engine is a huge piece of machinery, but it failed to come up to expectations. In the flying kilometre competition, however, it showed up very well, and it did some good performances in private trials.

CLAIMS 300 MILES WITHOUT WATER.

The sensational performance of M. Serpollet with his steam vehicle at Nice has once more shown that there is nothing to beat steam for short distances up to a mile, during which time it can run with the maximum of steam pressure, and it has generally been argued that carriages of this type are unable to show up well in long races owing to the necessity of stopping to take in water. M. Serpollet had hoped to show in the Abbazia that he had wholly overcome this difficulty with his new radiator, which, however, differs little from the ordinary systems of tubular condensers with thin gills. and he claims that he can now run the carriage more than 300 miles with a single supply of water, with the result that he expected to do all the stages to Abbazia without a stop. He built eight vehicles for the race, three of twelve horsepower and five of seven horsepower, and he-also had his tapered form of carriage, propelled by an engine of twenty horsepower, with which he covered the flying kilometre at the phenomenal rate of seventy-five mils an hour.

M. Serpollet declares that the peculiar form of the carriage greatly increases its speed qualities, and also provides a protection to the driver, who is thus able to travel much faster than would otherwise be possible. On this vehicle he had an auxiliary pump, so that sufficient water could be injected into the boiler to keep up the maximum pressure. The possibility of the boiler evaporating so much water may be taken as good proof of the efficiency of the flash type of generator when properly heated by kerosene burners. The Serpollet record vehicle has now become historical, but whether its peculiar shape will have any influence upon the design of other racing automobiles is another matter.

The Week's Exports.

Argentine Republic—1 case motor vehicle parts, \$112.

British Australia—2 cases auto vehicles, \$300.

London—41 cases motor vehicles and parts, \$29,351.

Mexico-2 cases motor vehicles and parts, \$1.081

Peru-1 case auto machs., \$40.

Port Rush—6 cases motor trucks and parts, \$216.





If a man or a party of them invited me to dine I should either accept or decline the invitation. If I accepted I should do all I could to show myself worthy of the invitation and to add to the enjoyment of my fellow guests. If I declined I should remain away from the scene of the dinner, so as not to embarrass those who had invited me. It would seem as though this course of procedure would be that adopted by any one conversant with the ordinary usages of society. What, then, would be thought of a man who, having accepted the invitation, went to the dinner and acted in every way contrary to the wishes of his host and the comfort of his zuests? What excuse could a man offer who, having declined the invitation, then took occasion to put in appearance at the time and place of the dinner, there to make himself as conspicuous and as obnoxious as possible? Change the word "dinner" and substitute for it "contest," leaving all the remainder of the case as I have stated it, and then what do you think of the men who acted in the manner outlined? If there is any excuse possible I must confess I cannot even imagine what it is.

. . .

The home of the Long Island Automobile Club is blessed with an abundance of roads just suited for the automobile. From the very beginning this club has done everything to win and to retain the goodwill of the people who own and live adjacent to these roads. The club's efforts have been successful so far as its own members have been concerned, but, much to the club's regret, it has seen visitors from New York come over and take possession of the roads in such a fashion as to antagonize the natives and bring about restrictive legislation which a little consideration on the part of the reckless visitors might have avoided.

. . .

Knowing this position of affairs, you would have thought that those who accepted the Long Island's invitation to take part in an affair which was so carefully planned to avoid breaking the laws or inciting further animosity on the part of the natives would only have accepted when they were determined to abide by both the spirit and the rules of the contest. But did they do so? Look at the reports, and you will see that the very men whose position and breeding you would have thought would have made them proof against any intentional discourtesy to their hosts were the very worst offenders in that respect. These "sportsmen" disregarded all the rules; they made the affair, as far as they were concerned, not an endurance contest, but a contest between reckless drivers bent on seeing which of them could leave the legal speed requirements the furthest behind. The gentlemen who had invited them, who had planned the event, and who would be the greatest suflerers by any selfish recklessness on the part of their guests, were never considered by these individuals, whose ideas of sportsmanship seem limited to the amount of notoriety they can obtain out of anything without of regard to the laws either of society or the State. It is to be regretted that automobiling has seemingly proven irresistible to this peculiar kind of sportsman; but it has, and until he finds some new plaything with which to selfishly amuse himself the public and the automobile must both continue to suffer from a boorishness which is particularly offensive because these guilty of it are in other things perhaps, the gentlemen which they would most promptly resent being told they were not in automobiling.

* * *

Tell a lie about an automobile, and it will have travelled a dozen miles before truth in pursuit has even reached the starting lever.

One of the alleged humorous papers takes occasion to remark that while the automobile is the cause of a number of funerals it has not yet been adopted as a vehicle fitted to follow after a hearse. Passing over the untruthful allegement of the automobile's deadliness and coming to the one that it has not been accepted as part of the funeral cortege, I am tempted to ask why should not a mourner attend a funeral in an automobile? Is it impossible for grief to travel only when it is drawn by a horse? Is sorrow so sensitive that it will take flight at the sight of an automobile or at the absence of a horse? I do not propose to answer these questions myself, preferring to leave that to those very "amusin' cusses" whose bread and butter is begotten through the editing of comic papers which are comic only because they are so stupid. Personally I hope that the horse as the choice of the undertaker will continue for all time, since I consider such a preference is more to the motor vehicle's benefit than to its injury. In fact, I cannot conceive of any one, other than the editor of a comic paper, thinking differently.

It is the idle rumor which is most overworked in the motor game.

. . .

To my mind the automobile trade, take it altogether, is to be congratulated on the very temperate tone of its advertising. With so many examples to the contrary, it is certainly very much to the credit of the trade that it has not slopped over, but has contented itself with stating the merits of its wares in language not too plentifully besprinkled with superlatives. I believe I am not different from most people when I say that an advertisement which reads like a circus poster really makes me angry. When, for example, a clothier talks to me through

the columns of a newspaper about a handme-down suit at ten dollars, as if it were the very quintessence of clothing genius, I get mad. He sets too low an estimate on my intelligence. He practically tells me he thinks me a fool, and therefore he talks to me as if I had no knowledge and less sense. He doesn't attract my trade. He repels me. If he goes into raptures over his ten-dollar garments he'll go into hysterics over his twenty-dollar ones, and by the time he gets to his thirty-dollar goods he or I will be going crazy. I want my money's worth, and as much more as possible, but I know perfectly well that I can't get fitted out at ten dollars with a suit of clothes equal to that worn by a millionaire. So I like advertisements that don't lay it on too thick. I trade with people who know that enough is as good as a feast. It is rare that so young an industry as the automobile trade so quickly discerns the danger of advertising superlatives and so promptly avoids it. This is why I say the trade should be congratulated on having started right and upon having continued as it started.

There is room at the top if you have sufficient horsepower to carry you there.

Nothing so angers a Frenchman as to be outdone by an Englishman. For some time the British wordsmiths have had it all their own way in dealing dictionarily with the automobile, but at last the Frenchman has shied his castor into the ring with "autohippovelodrome" attached to it. I have great faith in the invincibility of the British language butcher, because I have never seen

THE COMMENTATOR.

Organization of Road Users.

his equal, but in this case he certainly will

be put to it to retain his laurels.

Steps in the direction of forming a permanent organization were taken on Tuesday night, when representatives of a number of associations interested in the streets and roads of this city met. The purpose of the new body is stated to be the correcting of abuses and obtaining improvements in the streets and roads of the city and regulating the traffic on them, and the influence of a permanent organization comprising all the representative associations of those who ride a wheel, drive a carriage or a truck or an automobile will be brought to bear upon the proper authorities.

The following clubs and associations were represented: National Association of Automobile Manufacturers, Automobile Club of America, League of American Wheelmen, Associated Cycling Clubs of New York, Road Drivers' Association, Truck Drivers' Association and the New York Athletic Club.

Letters were read from the Road Drivers' Association, the Associated Cycling Clubs of Long Island and the Staten Island Driving Club signifying their willingness to be a part of such a body.



Took Chances and Won.

On its trial trip the steam touring car of the Century Motor Vehicle Co., Syracuse, N. Y., made a record such as falls to the lot of but few new vehicles. It went through the 100 mile endurance run of the Long Island Automobile Club without a skip, earning a blue ribbon as a reward.

Just prior to the start Manager Van Wagoner, who was operating it, remarked to the Motor World man that he did not even know how many stops for fuel would have to be made, as that was the car's trying out run.

The illustration gives a very good idea of the car. It is of the standard Century construction, except that it is heavier and has many new features which make it conform to the purpose for which it is intended. It has no reaches, the body being carried on angle steel sills. Four half springs are hung directly under the sills.

It is equipped with artillery wheels, has ball bearings throughout; the wheels are 36-inch, with 4-inch tires, standard track, 8-foot wheel base. The entire vehicle is hung very low and can be run at high speed without danger. The power equipment makes it capable of great speed; the boiler, burner and engine are of the Century standard models, only larger. In addition to the usual water glass on the outside of the body there is a water column for emergency use inside the body under the front of the seat, and it

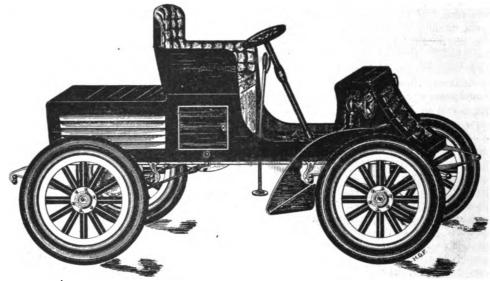
The Motor World.

which are located under the floor and do not take up valuable space. With the system of tanks used it is unnecessary to use the hand pump for pumping air when the car is standing or running even after filling the gasolene tank; in fact, the machine may be left standing indefinitely with steam up without using the hand appliance of any

Complete Line of Parts,

The Neustadt-Perry Co., of St. Louis, Mo., since locating in their new factory have introduced a complete new line of parts for a variety of steam and gasoline automobiles. They make a speciaty of supplying everything needed to build complete vehicles.

One style of their recently introduced



kind on account of loss of water in the boller or diminution of air pressure.

The bonnet in front is used for storing purposes only. Capacity of the water tank is

gasolene outfits is shown in another column. A very complete and up-to-date catalogue is sent free on application, and should be in the hands of not only those who build, but of storage stations.



A two story repository is being erected in Washington, D. C., by Daniel Loughran.

C. J. Field has removed to 152 West Thirty-eighth street, New York, where he will continue to sell Darracq cars.

A storage and repair station has been opened at 40 West Sixtleth street, this city, by the local branch of the Olds Motor Works.

The American Tube & Stamping Co. has succeeded the Wilmot & Hobbs Mfg. Co., Bridgeport, Conn. The capital of the concern has been increased from \$1,000,000 to \$2,800,000.

Banker Bros. have established temporary quarters at 57 West Sixty-sixth street, this city. As soon as their new quarters at 250 West Eightieth street are completed they will remove to that place.

Cole & Wood, 50 West Sixty-seventh street, New York, have completed a second miniature automobile for the Gould family. It was shipped to Lakewood this week. The present machine is a victoria, using electricity as a motive power.

The Knox Automobile Company, of Springfield, Mass., announces changes of address for two of its agencies. The New York agency is now at 152 West Thirty-eighth street, with T. N. Fowler in charge. The new location of the Chicago agency is at 1408 Michigan avenue, with H. M. Davis as representative.



it so located that it can be seen without the use of the mirror. All the hand valves which operate the burner, two sets of water glasses, boiler try-cocks, boiler feed and by-pass pump are located in a row and in easy reach of the operator.

The car is equipped with an automatic water feed pump on the engine, a steam boiler feed pump, hand boiler feed pump, steam air pump and a hand air pump in case of emergency or for use on tires. The machine is equipped with two 15 gallon gasolene tanks and one 15 gallon air tank, all of

90 gallons; is supplied with an ejector and hose for filling without the use of the bucket; in addition to this the tank is so located that it can be filled with a bucket without taking off the back cover.

All the water fed into the boiler goes through the Century feed water heater. The car is built for hard service, and weighs 2,400 pounds, loaded.

The Rattan Novelty Co., Indianapolis, Ind., are preparing to make a push for automobile trade on their rattan seats and hampers.

The Motor World.

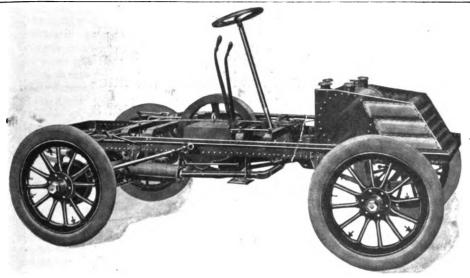
Building to Order.

Frank S. Ray, 1221 Fulton street, Brooklyn, N. Y., whose experience with all classes of automobiles is of the highest order, has gone into the business of designing and building of hydro-carbon business and pleasure automobiles to order.

It is generally conceded there is a large field for vehicles for strictly trucking purposes, which has been neglected in the rush R. Lincoln Lippitt, chairman of the committee on runs and tours, led the procession in his new Winton touring carriage. The club flags waving in front denoted this machine as pacemaker.

Motor Car's Red Letter Day.

Here in New York on Saturday last the first great classic event of the turf was contested, the Metropolitan Handicap, won, by



ELEVATION OF WINTON TOURING CAR.

to supply other conditions. The line of effort taken up by Mr. Ray, backed up by his extended experience, certainly presents a big future.

Edison Battery Almost Ready.

One of the stockholders of the Edison Storage Battery Co. is quoted as saying that the concern is almost ready to place the much talked of battery on the market.

"It has been perfected and practically complete for over a year," he adds. "The delay in putting it out is only to perfect manufacturing details at the plant so that the plates can be furnished at once in quantities equal to the demand.

"The merits of the new battery have not been exaggerated. Repeated fests have convinced us that we have attained the results at which we aimed. The Edison battery will show double the horsepower per hour per hundred pounds of any battery now in use.

"These results accomplished mean the practical solution of the electric motor problem, and will place the 'lead wagons' on an endurance par with vehicles driven by other motors. The convenience and simplicity of electric motors for automobile have never been disputed."

May Day Run.

The annual May Day run of the Rhode Island Automobile Club, held last week, proved the most successful touring event in the history of the club. Many of the racing vehicles participated, and the majority of the carriages in line were new vehicles, which showed wonderful improvement over last year's machines.

East Greenwich was the destination, and

the way, by the well known former bicycle manufacturer, Arthur Featherstone. The race was run at Morris Park, some eight miles from the Harlem River Bridge. Of

Underground Automobiling.

An exceedingly novel trip has been arranged for Mayor Low and several other New York officials. It is proposed to make up a party to go on a tour of inspection through an immense sewer that is now being constructed in Brooklyn, the idea being to impress the visitors with the magnitude and need of the work. May 17 is the date set, and the Mayor is scheduled to go at the head of a procession of seven automobiles, the passengers in which will be members of the Board of Estimate and department officials of Brooklyn, through the large fifteenfoot sewer that is now being built to drain the entire Bay Ridge section of Brooklyn.

The Mayor and the other officials will have the novel experience of travelling for a mile or more through a subterranean passage seventy feet or more below the surface of the streets.

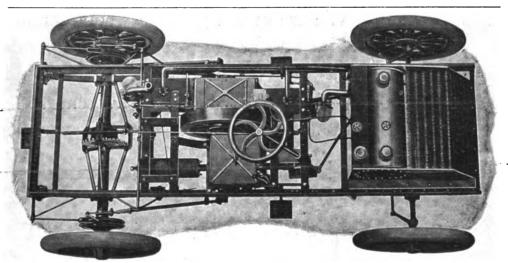
This sewer is one of the largest ever built, and when it is completed it will drain a territory covering the greater part of that section of Kings County south of Prospect Park.

Recent Incorporations.

Buffalo, N. Y.—E. R. Thomas Motor Co., with \$500,000 capital, to build automobiles. Directors, E. R. Thomas, Frederick Armstrong and A. B. Shultz.

Wilmington, Del.—The General Automobile & Mfg. Co., with \$125,000 capital, to manufacture automobiles.

Brooklyn, N. Y.-Regent Automobile & Ma-



PLAN OF WINTON TOURING CAR.

course, the elect went in vehicles of all kinds and descriptions, and after the race there was a mad rush for what the daily papers call the "lobster emporiums." Therefore, at evening over a thousand vehicles passed over the bridge on the way Gothamward, and among them the automobiles cut no mean figure. The motor cars easily took the laurels of the day in getting home first. In the first bunch were 27 horse driven vehicles and 26 motor vehicles, and of the first 167 vehicles 100 were horse driven and 67 motor driven—a not very bad record in this early day.

chine Co., with \$50,000 capital. Directors. George W. Bartholf, Jamaica; Charles A. Mezger and Minnie Mezger, Brooklyn.

Motor Bicycles Now, Vehicles Later.

The Buckeye Motor Co., of Columbus, O., has been formed by Oscar S. Lear and Messrs. Frayer and Miller, and a factory is being built and equipped to build automobiles, motor bicycles, motors and accessories. The immediate purpose is to build motor bicycles, designed after a model already on the market manufactured by Frayer and Miller. Later automobiles will be taken up.



Sound Advice.

What has there been wanting during the past three years to make Single Tube Automobile Tires more satisfactory? We will tell you. A repair kit which would successfully close a puncture in a few minutes, and make a permanent repair. The owners of machines object to removing tires and sending them away to be vulcanized for the reason that they lose the use of the machine, and the expensive method of repairing.

We have a device that anyone can use successfully, and it should surely stimulate the use of Single Tube Automobile Tires. We shall be glad to furnish a complete kit for \$2.00 and ship it to you on trial, to be returned if unsatisfactory.

We are making the best continental type of Detachable Tire on the market—patents pending. When you think it over, don't let anyone persuade you that any Detachable Tire can be easily removed and repaired on the road. It is a difficult piece of work for an expert.

The Diamond Rubber Company Ekron. Obio.

NEW YORK, 1717 Broadway. NEW YORK, 15 Warren St. BOSTON, 234 Congress St. BUFFALO, 41 Court St. PHILADELPHIA, 435 N. Broad St. CHICAGO, 429-431 Wabash Ave. SAN FRANCISCO, 8 Beale St. DENVER, 1562 Broadway.

DETROIT, 310 Woodward Ave.

Reduced Weights, Increased Power.

As far as can be known at this distance and in the absence of extended tests, the problem presented to foreign automobile manufacturers of reducing the weight of their racing cars, while at the same time increasing their speed and power, has been solved in a highly satisfactory manner.

When the maximum limit for cars entered in this year's races was placed at 1,000 kilograms-2,000 pounds-there was much shaking of heads and not a little real trepidation felt. In the matter of speed it was impossible to stand still; faster cars must be produced by each concern, and how to do this and at the same time reduce the weight was a task which it was felt would tax severely the ablest designers.

All reports agree, however, tthat the difficulty has been accomplished, and that with the reduced weights has come a marked advance in simplicity and the much-desired increase in speed

The result is remarkable, and almost equally gratifying. Whether or not the undoubted influence which racing cars exercise over vehicles built for road and pleasure service has been exaggerated is not really the question. It is, rather, that any improvement which is made in vehicles intended primarily if not solely for racing, is certain to be reflected in the other and more widely used type.

For example, the user of a single cylinder.

low-priced gasoline runabout of the type so popular in this country will eventually be benefitted by the marked success attained by foreign builders in simplifying their motors and vehicle parts. Much more is this true of the moro expensive cars of the same ស្សន្ន

(Continued from page 162)

BLIND FRENZY OF THE AUTOPHOBES.

nance amended so as to keep the speed at eight miles in the crowded streets and a greater latitude allowed outside?" he was next asked.

"No, there is not time to do this. We shall oppose the passage of the new provision, and go to Mayor Low with it. If the automobile club is really in earnest why doesn't it come to us and try to have the ordinance amended?"

Chairman G. F. Chamberlin of the law committee of the Automobile Club of America was next seen by The Motor World man.

"That would suit us to a T," he said when told of Mr. Backus's wish. "The ten mile ordinance is nothing more than a halfway measure. If we could get speeds of eight and fifteen miles legalized, or eight, ten and fifteen, the speed depending on the district. I should be perfectly satisfied."

It is reported that two of the latest pattern Mercedes-Simplex, the product of the famous Cannstadt works, will reach this city in a few days and be placed on sale.

Extensive Ton-Mile Figures.

A large number of experiments have been made in France on the amount of gasolene required per ton-mile by different makes of motor cars. In general the amount needed is proportionately greater for light cars, the best efficiency being noted with cars weighing about one ton. The results obtained in one of the most careful of these trials showed that on a run of 62 miles, with voiturettes weighing 5 cwt. to 6 cwt., the consumption was from 3.47 oz. to 6.15 oz. per ton-mile. With light voitures weighing from 6 cwt. up to 1 ton, the consumption was from 2.61 oz. per ton-mile up to 3.32 oz. per mile, and with two voitures, each weighing about 1 ton, the consumption in the one case was 2.06 oz, per ton-mile and in the other 2.80 oz. per ton-mile. The heavy voitures weighing from 11/2 tons up to 2 tons did not do as well, the best result being a consumption of 3.17 oz. per ton-mile and the worst 3.34. With a couple of motor vans, which did not run the whole distance, the figures registered were 2.94 oz. per ton-mile for a car weighing 2.89 tons and 4.88 oz. per ton-mile for a lighter van weighing 1.84 tons.

Detroit will have another automobile racemeet this season. It will be run at the Grosse Point track early in August-probably the first week-and every effort will be made to exceed the successful event of last year.

RUNS EVERYWHERE

THE OLDSMOBILE

THE BEST THING ON WHEELS

For country and city, for pleasure riding and business driving. The OLDSMOBILE cannot disappoint the highest expectations. The length of the wheel base, about 5½ feet, gives an easy movement to the steering lever and insures smooth riding on rough roads.

SALES AGENTS

SALES AGENTS

Oldsmobile Co., 138 W. 38th St., New York.
Oldsmobile Co., Washington, D. C.
Quaker City Automobile Co., Philadelphia, Pa.
H. B. Shattuck & Son, Boston, Mass.
Oldsmobile Co., 411 Euclid Ave., Cleveland, O.
Wm. E. Netzger, 254 Jefferson Ave., Detroit, Nich.
A. F. Chase & Co., Ninneapolis, Ninn,
Sutcliffe & Co., Louisville, Ky.
Ralph Temple Co., 293 Wabash Ave. Chicago, II.
Pisher Automobile Co., Indianapolis, Ind.
Olds Gasolene Engine Works, Omaha, Neb.
George Hannan, 1455 California St., Denver, Col.
The Manufacturers Co., 97 Fremont St., San Prancisco, Cal.
Bankers Bros. Co. East End, Pittsburg, Pa.
C. H. Johnson, 55 So. Forsyth St., Atlanta, Ga.

THE OLDS MOTOR WORKS

DETROIT, MICH.



The Motor World.

SHOW'S GROWTH

Britain's Fourth Annual was a Marked Success -Foreign Ideas Still Influential.

The fourth annual show of the Automobile Club of Great Britain and Ireland, which was held at the Agricultural Hall, London from April 19 to 26, was an entire success. Next to the French exhibitions it is claimed to have been the finest ever held anywhere.

The hall was well filled; indeed, the complaint is made that there was not sufficient space. There were more than 270 exhibitors, the major part of them being British, representing either home or foreign goods. As the show was restricted to firms which had not shown elsewhere this year, there were a number of absentees. But they were not important enough to affect the general success of the show, which is admitted to have been a great advance over any other British show yet held.

The gasolene exhibits were made up, for the greater part, of foreign cars or cars designed on foreign lines. In a few cases departures from the convential types were in evidence, showing that British designers are groping for something distinctive, even if they are not accomplishing very much in that direction. Nevertheless, the stamp of the foreign design was upon pretty nearly everything in this section.

Curiously enough, the same remarks are applicable to the showing of steam vehicles, and this notwithstanding the well-known predilection of British users for this type of car. The American vehicle predominated,



PRESCOTT STEAM CARRIAGE. H. M. WELLS AND H. T. DUNN.

and the ones owing their origin to British ingenuity rarely departed from what may be regarded as the standard design. There was little effort made to hit upon a new steam vehicle design, or to get closer to the gasolene one, both of which tendencies are very noticeable in this country. Indeed, the few British steam carriages are scarcely distinguished from what may be termed the locomobile type. The Serpollet-French type-also seems to be making considerable headway. This is also true of vehicles of the flash or semi-flash type, one or two British carriages of this kind being noticed.

The showing of electric vehicles was small,, there being but half a dozen exhibits all told. Two of these were of American manufacture. As here, the designs followed closely those of horse-drawn vehicles.

As was to have been expected, commercial vehicles were a feature of the show. Ten exhibitors were represented, most of them being firms of reputation, whose exhibits were in keeping with their standing. The heavier vehicles used steam as a motive power, the gasolenes rarely weighing more than a couple of tons.

Taking the show as a whole, it may be said that little of startling nature was exhibited. It was indicative, however, of a marked grow in the British trade, and there is no doubt that each year will witness greater progress along these lines. The desire to manufacture at home, and thus become independent of foreign concerns, is very strong.

Among the American firms represented, directly or through agents, were the Elmore, the Oldsmobile, the White, the Locomobile, the Steambile, the Foster, the Reading, the Milwaukee, the Electric Vehicle Co.'s carriages and the Baker.

TO ITS BLUE RIBBON RECORD OF 100 PER CENT.

The Long Island Endurance Test

J. INSLEY BLAIR'S

Passenger Panhard-Levassor 16 H.P. Panhard-Levassor

HAS BEEN ADDED

First Prize in the Gasolene Consumption Test.

(Class E.—For vehicles weighing more than 2000 pounds.)

RECORD: 13 GALLONS FOR THE 100 MILES.

Thus is the PANHARD once more proven not only the most reliable, but the most economical.

SMITH & MABLEY, Distributing Agents, 513-515 7th Ave., New York.

The Motor Wiend.

Hartford Police Ambulance.

An order has been placed with the Electric Vehicle Company by the Police Commissioners of Hartford for the electric ambulance to be used by the city, and referred to by The Motor World last week. The specifications call for a running gear similar to that of the Hartford police patrol wagon supplied about a year ago by the same company. The body and the furnishings of the ambulance will present various improvements upon standard hospital style. The maximum weight will be approximately 4,500 pounds without occupants; average speed, 11 miles per hour; mHeage, 25 to 30, according to road conditions; wheels, Archibald type, equipped with three-inch solid rubber tires; side lever steering, two foot-operated brakes.

The detail equipment includes a leather covered cot, which will be the full width of the vehicle, working in slides; two stretchers, sliding side windows at rear, full length rear doors with top windows, surgeon's seat at rear, and broad step, two dome electric lights in ceiling, two outside side lights and headlight, curved dash.

The purchase of this ambulance has been based very largely upon the unqualified success of the electric patrol wagon, which has much more than justified the most sanguine expectations of those who argued in its favor when the question of its installation was a live topic of discussion in Hartford's police and newspaper circles.

The records of the department seem to have completely demonstrated the great advantage of electric over horse drawn vehicles for this class of service. The patrol wagon has withstood the strains of unusually severe service under all sorts of weather conditions. During one of the severest storms of the past winter, when trolley service was at a standstill, the wagon, loaded with nine prisoners, the driver and two policemen, made its regular morning trip from court to jail, covering the distance of two and one-half mfles in only four minutes less than the regular running time.

Salisbury Gets a Locomobile.

Among the late purchasers of Locomobiles in England, where these vehicles have long been exceedingly popular, is the Marquis of Salisbury.

Want Increased Capital.

A meeting of the stockholders of the Niagara Motor Carriage Co., Buffalo, has been called by Manager Lindstrom for the purpose of securing additional capital. It is proposed to build a new factory, the present quarters being deemed inadequate, and \$25,000 will be asked for.

issues a Monthly.

Latest among the automobile concerns to begin the issuance of a monthly publication is the International Motor Car Co. The International Motor Car made its appearance last week. It will be published with an eye to the welfare of the company's agents, and future numbers are expected to contain contributions from them.

Has Elected Officers.

The officers of the Hartford Auto and Livery Co., of Hartford, Conn., which was recently incorporated, are Frederick C. Rockwell, president; C. H. Strant, vice-president; Edwin D. Alvord, treasurer, and F. W. Dart, secretary.

The capital stock of the company is \$45,000, of which amount \$43,000 consists of property turned over to it.

Busy at the Run.

One of the busiest men at the starting point of the 100-mile Endurance Run last Saturday was Harry J. Hall, jr., former tire exploiter and present oil vender. He distributed among the starters small sample cans of his Visco lubricating oil, with the injunction that they be tested during the run.

"You see," he remarked confidentially to the Motor World man, "I have such a good article that I feel that I am playing the part of philanthropist in making its merits known. I learned, quite accidentally, of the trouble there was to obtain a satisfactory oil, and I turned my mind to the task of getting up something that would do the work. This is the result"—pointing to a can—"and, if I do say it myself, it is the best ever put on the market."

He Wants to Know.

Belabored and buffeted until he scarcely knows where he is "at," the automobilist sometimes turns and asks some pointed questions. That old friend, "Constant Reader," for example, propounds these to the "Herald":

"You published an article in your paper last week containing a very long list of things that automobiles could not do under the laws now in force. Would you please publish a list of things that we can do or the counterpart of the article you refer to.

"As to an eight mile limit of speed, this is absurd, as any one can understand, by timing any passenger conveyance for a block, that the average speed of carriages is nearer ten miles an hour.

"When I make this assertion I refer to horses as well as motor carriages.

"There was also reference in your paper to the speed of electric cars and placing the limit by law at eight miles an hour. Their speed in reality is between eighteen and thirty-five miles an hour, and statistics show a very large number of accidents caused by these cars.

"It seems to me very strange that these public cars are allowed to run at the great speed that they do and private automobiles stopped whenever they try to pass an old hack horse. I have also noticed that drivers of horses are allowed to go much faster in parks and drives, such as Seventh avenue above the park, where I have seen two trotters racing past policemen who did not in any way hinder them."

Pratt May Take Hold.

Negotiations are in progress looking to the formation of a company to take over the business of B. J. Carter, of Jackson, Mich., manufacturer of steam automobiles. The plan is to remove the plant to Grand Rapids, where the old factory of the Clipper Bicycle Co. will be made use of.

It is expected to form a company capitalized at \$400,000, of which \$100,000 is to be preferred stock to represent that amount of capital and to be guaranteed 6 per cent. dividends before anything is paid on the common stock. The name suggested for the company is the Clipper Auto Car Company. It is proposed to manufacture automobile parts, as well as the complete machines, the plant at Jackson already having an established business in both of these lines. J. Elmer Pratt will act as superintendent of the plant if the project goes through.

Big Electric Vehicle Business.

Never in its history has the Electric Vehicle Co. been doing a larger business than at present. Every department is crowded withwork. For several months past there has been a steady increase in the demand for electric automobiles of all types, and the several new models which the company has placed on the market within the past year have met with a ready sale. Recently unusually heavy foreign orders have been booked, and work at the factory has received additional stimulus through sales of many of the larger and more expensive vehicles made by the company, notably the new extension-front broughams. Within the past few days ten of these luxurious vehicles have been ordered by private parties for delivery between now and fall. Several of them will go to New York City.

How to see New England at Home.

New England has never been presented in better form in the way of illustrations than that given in the "Portfolios of views" covering the various picturesque sections of the summer playground under the following groups: Mountains of New England; Seashore of New England, Lakes of New England, Rivers of New England, and Picturesque New England, the latter illustrating many historic spots. Each portfolio contains thirty or more halftone pictures, and will be mailed upon receipt of six cents for each book, together with a catalogue of descriptive books, by the Passenger Department, Boston & Maine Railroad, Boston.

Air and Water Pumps.

THE UNION STEAM PUMP CO., BAT-TLE CREEK, MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.



The Motor World.

Some Mercedes Points.

"The new Mercedes is certainly a very fine car." says an observer, writing from Nice, where he examined it. "It is, of course, a four-cylinder car designed by Maybach, with a motor which runs at a speed varied between 150 and 1,200 revolutions a minute. I say this advisedly, as the regulation is so perfect that the speed can be reduced to 150 turns a minute by simply turning a handle which actuates a choked valve on the admission.

"The ignition is by magneto, with a makeand-break spark; the admission and the exhaust are regulated together, and therefore work in unison; and the motor weighs between eight and nine pounds per horsepower developed. The radiator is similar to that which has always been employed on Mercedes cars, with this difference, that instead of there being a fan the flywheel of the motor supplies the current of air when the car is standing. Only one gallon and a half of water is used, and this evaporates so little that in the whole day's run the loss is inappreciable. Both the change of speed gear and the friction clutch are new, and all the bearings and the wheels run on balls. Chains are still used."

What its Purposes are.

The Association Générale d'Automobile, the new French popular organization, has just issued a manifesto, in which it is said that "the association does not propose to interfere with the A. C. F., which is its founder; it addresses itself particularly to the great masses; it is general, as its title implies, and accessible to any one. Its utility is incontestable for amateurs, for thinkers, for technicians, inventors and workers; each will find their place in it.

"The amateur and the thinker will find indications helpful and interesting, and will contribute to the general good by formulating their plans, which will be duly registered and put before the most suitable persons, having all the authority and competence of such a multiple association. The inventor will find in the association publicity for his ideas, and from the tribune he will be heard by the technician and the capitalist. Our association will take in hand things of general interest which, single handed, would lie idle. It will be a link between the employer and the employed, between the seller and the buyer, grouped together under the same flag and with the same purpose.

"This flag, a sign of union, will be for us what the Touring Club's flag is to the tourist. We shall work hand in hand with the Touring Club, trying to do for the automobile what it has done for the cycle."

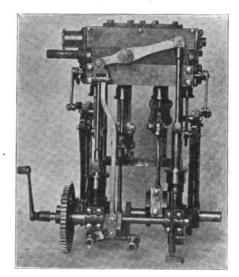
A Two-Time Winner.

To the Haynes-Apperson belongs the honor of being the only car to win blue ribbons in both the Endurance Runs of the Long Island Automobile Club. Last year the surrey belonging to H. S. Chapin won the coveted prize, and on Saturday week his runabout, driven by Elwood Haynes, duplicated the performance.

A Sterling Product.

An engine that has come in for a great deal of praise is the Sterling automobile engine, manufactured by the Sterling Automobile & Engine Co., Sterling, Ill.

It will be seen by the cut that both cylinders are cast in one solid piece, and that the lower heads are cast in solid, giving no chance whatever for the gaskets to blow out and thus cause trouble. The stuffing boxes are also cast and finished right on the cylinder, and the stuffing boxes of both the valve and piston rods are where they can be readily got at for repacking, there being no obstruction whatever. The guide bars for the crosshead are placed on the back side of the engine, and are so constructed that the wear can be easily taken up. The crosshead



pin is so constructed that all lost motion can be easily adjusted, and the joint on the crank pin is so designed that the lost motion can be taken up in twenty seconds' time. One year's wear can be taken up before this joint has to be taken apart and filed. The eccentrics are so made of cast steel and hardened, the eccentric straps being also made of cast steel, but not hardened. The link block is connected to the valve stem between the guide and the stuffing box, giving no chance whatever for the valve stem to be bent.

The slow running water pump connected directly to the engine is one of the important features of this engine. The engine makes 2½ revolutions to the pump's one, thus making a pump that the builders can guarantee to never fail to work, and it will pump the water as hot as it ever gets in the tank. This pump is also operated by a crank at the side of the automobile, and no other hand pump is necessary. Two check valves and one bypass valve constitute the valve arrangement for the whole pumping system. The air pump is also a slow running one, and is operated by the same motion as the water pump.

Alexander W. Doe, formerly with the International Motor Car Co., Toledo, has accepted an important position with the Morgan Motor Co., Worcester, Mass.

Heavy Demand for Victorias.

So great has been the demand for the new Columbia victoria that the first lot which the Electric Vehicle Co. put through, with the expectation of its lasting out the present season, was entirely sold by the middle of April. By that time work was well under way on a new lot, from which deliveries will be made before the first of June.

The new victorias, while preserving in full the fine lines and general constructive design of their predecessors, will embody certain changes, each in the line of decided improvement. The double motor equipment will be more efficient and powerful, gear and brake surfaces will be increased, the front bonnet will be removable, and the seat board hinged so that the batteries will be readily accessible for inspection at all times without taking them from the vehicle. These changes will materially increase the cost of production, and the price of the victoria, with hood, has been changed from \$1,475 to \$1,600; without hood, from \$1,350 to \$1,500.

Will Have ten Doors.

The new "garage" of the New York Athletic Club on Travers Island will be about 75x150 feet, and provided with at least ten doors, distributed at the front and on either end. This will enable chauffeurs to run their machines into the garage at any one of the entrances and leave it in its proper place, facing outside, so that the exit may be made without difficulty. Besides all other necessary departments, such as electric storage facilities, gasolene and other supplies, there will be a repair department, in charge of competent mechanics. The garage will have accommodations for upward of fifty machines.

Automobile Auction at Tattersall's.

There seems to be something incongruous in selling automobiles at auction at Tattersall's, Paris, the famous horse emporium. Perhaps that accounts for the absurdly low prices brought by a number of well known French motor vehicles a few days ago. Some notable instances were a 9 horsepower Dietrich, which sold for 1,400 francs (\$280), about the price of the upholstering; a 6 horsepower Clement sold for 1,300 francs (\$260), a 24 horsepower Panhard for 8,500 francs (\$1,700), and a 16 horsepower Mors for 6,800 francs (\$1,360).

Contains No Air.

There is a strong probability that the Brooke Airless Tire Co., of Denver, will locate at Buffalo. A representative of the company is in Buffalo looking over the ground. The tire is described as being one which contains a rubber core circular in shape and connected on the inside in the form of rings. The rubber core is resilient and produces the same effect as the ordinary pneumatic tire, without the danger of punctures. It will be bullt not only for automobiles, but for motocycles and other vehicles.

The Week's Patents.

697,986. Controller for Electric Vehicles. Henry H. Cutler, Chicago, Ill. Filed Aug. 24, 1899. Serial No. 728,264. (No model.)

Claim.—1. In a controller, the combination with the several elements of the power supply to be connected in varying relations, of contacts connected therewith, a plurality of solenoids for controlling the several contacts, a switching device for controlling said solenoids and a master solenoid for controlling the circuits through said several solenoids, substantially as described.

698,262. Brake. Walter A. Crowdus, Chicago, Ill. Filed July 18, 1901. Serial No. 68,764. (No model.)

Claim.—1. The combination with a revoluble shaft, of a drum secured thereto, a brake band applied thereto, a slotted link to which the ends of said brake bands are attached, a lever, a pin therein which engages the slot in said link and stops which limit the movement of said link circumferentially of said brake drum, substantially as described.

698,131. Motor Vehicle. Ransom E. Olds, Detroit, Mich. Filed Oct. 18, 1901. Serial No. 79,081. (No model.)

Claim.—1. In a motor vehicle, the combination of a rigid motor supporting frame, the motor shaft journalled thereon, a bracket secured to the frame, a counter shaft journalled therein and extending to the side of the frame, a crank for actuating said counter shaft, and a gear connection from the counter shaft comprising a clutch permitting the rotation of the motor shaft independent of the counter shaft or through the medium of said counter shaft.

698,232. Steam Propelled Road Vehicle. Sidney S. Straker, London, England. Filed Oct. 28, 1901. Serial No. 80.329. (No model.)

Claim.—In a steam propelled road vehicle, the combination with the front axle connected by springs to the frame so that it can rock and slide vertically, of a boiler arranged over the said axle, a shaft, a pair of horizontal engines in communication with the boiler and having their piston rods connected to cranks at right angles to one another on said shaft, a pair of pinions of different diameters mounted on said shaft, a counter shaft, a pair of wheels mounted on the counter shaft and adapted to be suitably engaged by the said pinions, a sprocket pinion mounted on said counter shaft, a differential gear connecting the two parts of the hind axle of the vehicle, a sprocket wheel on said gear, connections between said sprocket pinion and said sprocket wheel, springs attached to the frame of the vehicle and adapted to slide under it, bearings carried by the springs for the hind axle, a bearing on the counter shaft, and a radius rod for connecting the springs to the bearing on the counter shaft.

698,287. Robe Lock for Vehicles. Arley M. Johnson, Belle Center, Ohio. Filed Dec. 28, 1901. Serial No. 87,610. (No model.)

Claim.—1. In combination with a lap robe, a plate attached thereto, and having a projecting end provided with an opening, a clamping member secured to an anchoring device and having arms to receive the projecting end of the plate between them, said arms having openings to register with that in the plate, and a locking device to engage said registering openings and secure said plate to said clamp, substantially as described.

698,376. Motor Vehicle Frame. Walter A. Crowdus, Chicago, Ill. Filed June 25, 1901. Serial No. 65,941. (No model.)

Claim.-1. A vehicle gear or underframe

comprising front and rear transverse frame members, a reach secured to the front transverse frame member and terminating in front of the rear transverse frame member, truss rods or struts which connect said rear transverse frame member with the reach at a distance from its rear end and a transverse brace which connects the rear end of said reach with said truss rods or struts, substantially as described.

698,407. Steering Gear for Vehicles. Paul L. Malicet and Emile E. Blin, Aubervilliers, France, assignors to La Société Anonyme des Etablissements Malicet et Blin. Filed Nov. 29, 1901. Serial No. 84,104. (No model.)

Claim.—1. In steering gear for vehicles a steering spindle provided with a worm thread, a nut mounted thereon, means for driving the nut in a longitudinal non-rotatable direction, a longitudinal rack on the outer surface of the nut, a pinion engaging therewith and mounted on a steering rod and an eccentric bearing for said steering rod, substantially as described.

698,036. Motor Vehicle. Charles L. Mayhew, Saratoga Springs, N. Y. Filed May 21, 1901. Serial No. 61,264. (No model.)

Claim.—1. The combination with a motor and its casing, of the motor shaft, bearings carried by the motor casing concentric with the shaft, a hanger including spaced arms swingingly mounted upon the bearings, a drive shaft mounted in the hanger and operatively connected with the motor shaft, a driving member upon the drive shaft, and means connected with the hanger for holding the power shaft in constant spaced relation with an axle to be driven.

698,039. Process of Making Plates for Storage Batteries. Achille Meygret, Paris, France. Filed Dec. 3, 1900. Serial No. 38,553. (No specimens.)

Claim.—1. The process of producing electrodes for storage batteries consisting in forcing a disintegrated active mass through a die plate to form the mass into hollow sticks or tubes, placing these hollow sticks or tubes in a suitable mold, running metal into the mold which conducts the metal into the bores of the hollow sticks or tubes, that portion of the metal remaining in the nold constituting a frame integral with the metal cores received in the bores of the hollow sticks or tubes.

698,446. Rubber-Tire Setting Machine. Joseph A. Burrows, Akron, Ohio, assignor to the Goodyear Tire and Rubber Co., Akron, Ohio. Filed July 31, 1901. Serial No. 70,403. (No model.)

Claim.—1. In a rubber-tire setting machine having gripping devices for holding the wires for brazing and a winding drum to draw said wires, and means for turning said drum, of a regulating device to equalize the tension of said wires located between said drum and gripping device consisting of a pivoted lever having its opposite arms arranged to sustain the wires, substantially as shown and described.

698,454. Filler Compound for Tires. Adolfo de Clairmont, Topeka, Kan., assignor of one-half to Albrecht Marburg, Topeka, Kan. Filed Nov. 7, 1901. Serial No. 81,436. (No specimens.)

Claim.—1. A composition of matter for filling tires consisting of glue, molasses, water and granulated cork in about the proportions specified.

2. A composition of matter for filling tires consisting of glue, molasses, water, resin and

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granulated cork in about the proportions specified.

Vehicle. Arthur Herschmann, 698,493. New York, N. Y. Filed Oct. 18, 1901. Serial No. 79,150. (No model.)

Claim.—1. In a vehicle, the combination of the body and an axle, with vertical upright guides connected with the body on each side thereof and through which the axle projects, and springs attached to the body at points in front and rear of the guides and passing through said guides and resting freely on the top of the axle therein, substantially as specified.

698,494. Braking Device for Compensating Gears. Arthur Herschmann, New York, N. Y. Filed Nov. 19, 1901. Serial No. 82,887. (No model.)

Claim.-1. In a self-propelled vehicle, the combination of a divided shaft, a compensating gear drum applied thereto, an idler or supplemental wheel loosely mounted on one part of said divided shaft and normally rotating at substantially the same speed as said drum, and means operated by the development of substantial difference in speed of rotation between said idler and said drum for causing the stoppage of the compensating gear device carried by said drum, substantially as and for the purposes described.

698,557. Ball Bearing. Charles E. Roberts, Oak Park, Ill. Filed Sept. 17, 1900. Serial No. 30,237. (No model.)

Claim.-1. The combination in a ball bearing for axles, of the cup, the ball ring, the cone, the balls and a loose split ring for holding the balls in the cup when the cup and cone are separated, such ring being located in the axial opening between the cup and cone, substantially as specified.

698,697. Water Tube Boiler. Stuart E. Freeman, St. Louis, Mo. Filed April 30, 1900. Serial No. 14,921. (No model.)

Claim.-1. In a water tube boiler, the combination of a pair of heads, water supply and steam pipes each having connection to both of said heads, field tubes and circulating tubes connected in independent sets to said heads, and a superheater coil connected to said steam pipe and arranged above said circulating and field tubes, substantially as described.

698.726. Vehicle Tire. William McCausland, New York, N. Y. Filed Jan. 18, 1901. Renewed Oct. 8, 1901. Serial No. 78,010. (No model.)

Claim.-1. The combination with a wheel rim having grooves in the sides, of the metallic plates secured to the wheel rim and having inwardly projecting ribs or beads adja-cent to their inner and outer ends, the wooden tire having grooves in its sides, said grooves being of a width greater than the width of the ribs or beads, the interposed cushion between the rim and tire, and the safety bolts passing through the plates, and also through the wooden tire, substantially as described.

698,729. Motor Vehicle. Patrick J. Mc-Mahon, Key West, Fla. Filed Sept. 21, 1901. Serial No. 76,096. (No model.)

Claim.-1. In a road vehicle, the combination with the rear wheels and a platform disposed between the wheels, of rotary suspension means connected to the wheels and resiliently connected to the platform in advance of the axes of the rear wheels.

698,753. Motor Vehicle. George W. Smith, Hardin, Mo. Filed Aug. 28, 1901. Serial No. 73,583. (No model.)

Claim.-1. In a motor vehicle, the com-

bination with a stationary axle frame, of a reach secured thereto, a movable axle frame having a pivotal connection with the reach, a sectional axle shaft mounted on each frame, said sections being connected by compensating gearing, and a driving shaft mounted longitudinally of the reach and geared at its opposite ends to the axle shafts.

698.836. Motor Vehicle. Wallace L. Hight, Boston, Mass. Filed July 27, 1901. Serial No. 69,898. (No model.)

Claim.-1. In a motor vehicle, a main frame, a steering frame, and a connecting frame, a vertical pivotal bolt attaching said main frame to said connecting frame, a horizontal pivotal bolt attaching said connecting frame to said steering frame, a pair of wheels arranged to rotate upon axle bearings fast to said main frame, a rotary axle arranged to rotate in bearings fast to said steering frame, a pair of wheels fast to said rotary axle, and a steering wheel arranged to rotate in bearings in a swivel frame, said swivel frame arranged to swivel in bearings upon said steering frame.

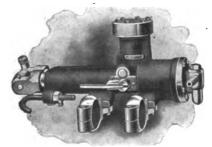
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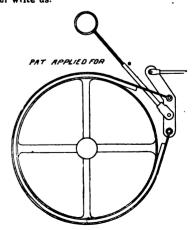
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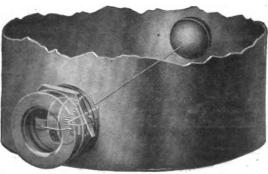


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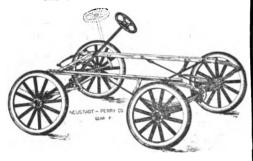
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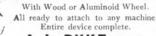
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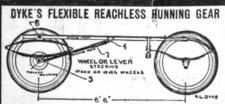
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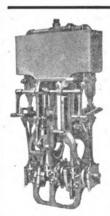
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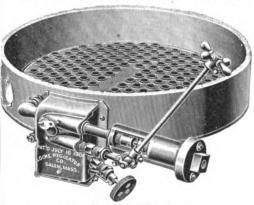
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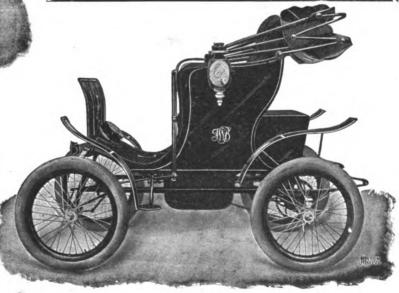
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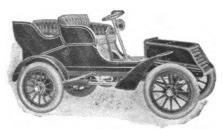
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THE ONLY STEAM VEHICLE THAT EVER COMPLETED 100 MILES ON THE ROAD.

without adding a drop of fuel or water to its original supply.

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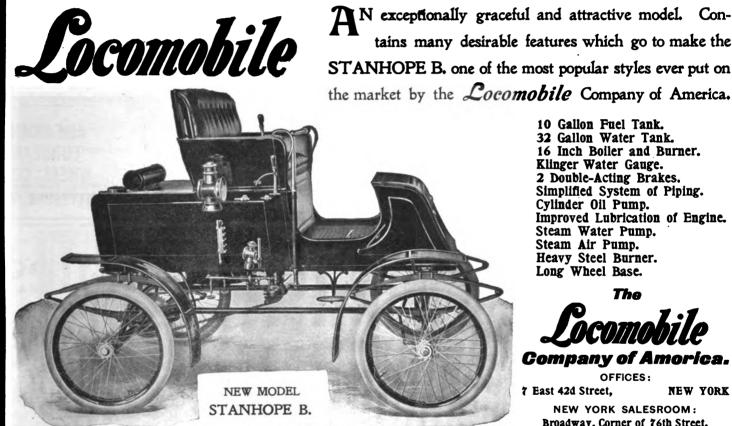
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BOSTON, 60 State St. CLEVELAND, New England Building. DETROIT, Michigan El. Co., 101 Woodward Ave.



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TOMOBILE COMPANY OF AMERICA,

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The following extracts from the daily press speak for themselves:

So far as the great contest is concerned, it was a success beyond expectation. That it will be of incalculable benefit to the trade and sport of automobiles, admits of no doubt. That it demonstrated the practicability, endurance and economy of motor vehicles, even the sceptic must admit, and, far more important than anything else, it showed the wonderful progress that has been made by American manufacturers during the past year.

The extraordinary work of the Fournier-Searchmont cars is a matter of favorable comment among automobilists in general. It was the first American machine to arrive without having made a stop of any kind. The second Searchmont to arrive was delayed half an hour on account of a disabled tire.—New York Mail and Express.

Speed, reliability and economy in automobiles were proved beyond question in the Long Island Automobile Club's 100-mile endurance test over Long Island roads yesterday. The development of motor vehicle construction showed a remarkable advance over last year.

Probably the most surprising event of the whole journey was the notable performances of the Fournier-Searchmont cars, that were the first American machines to finish, and naturally they are credited with having made faster time than any American machine in the run. R. A. Green's machine was fifth at the finish in 5 hours 21 minutes 30 seconds. It was followed four minutes later by E. B. Gallaher in a Fournier-Searchmont.—Philadelphia Ledger.

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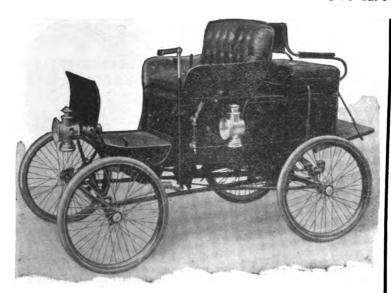
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is used and recommended by tire manufacturers and is the only liquid that can be legally used in any pneumatic tire.

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Are all they OUGHT to be and a little more; different from most steam carriages in that respect.

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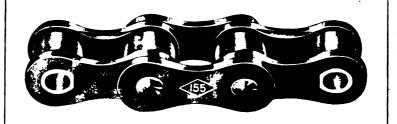
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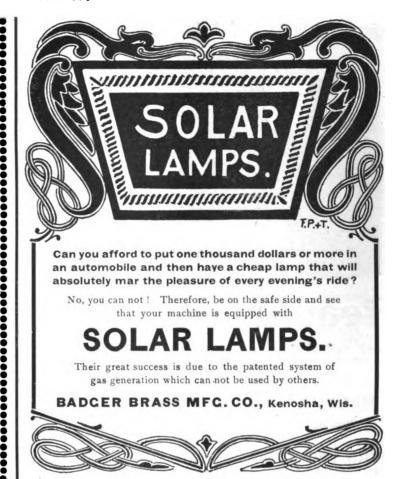
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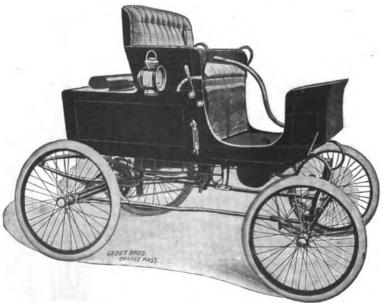
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Double Cylinder Balanced Engine.

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100 Miles Capacity. Speed 20. 20% Grades. Water for 300 Miles.

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THE "DARRACQ" RECORD

Winner of 47 firsts out of 52 Races in 1901.

Winner at Annual French Hill Climbing Trials at Gaillon Hill, November 1901.

The "DARRACQ" 16 H. P. cars were WINNERS with the remarkable speed up an average 8 per cent. grade of 36 MILES an hour, defeating all 40 H. P. Panhards and 50 H. P. Napiers.

The New York "Herald" December 22, 1901, by cable from Paris, says Gabriel on a "Darracq" Car broke the record for light car for a flying kilometer and mile in 39 4-5 seconds and 1 minute 3 seconds, respectively, and a standing mile in 1 minute 13 seconds.

Awarded Gold Medal at Automobile Show, London, February, 1902, for Best Car of high powered light class. Also won the French Economy Tests in same class, February, 1902, with a record for 6 1-2 liters for 100 kilometers, approximately FORTY-FIVE MILES run on one gallon.

AMERICAN DARRACQ AUTOMOBILE COMPANY

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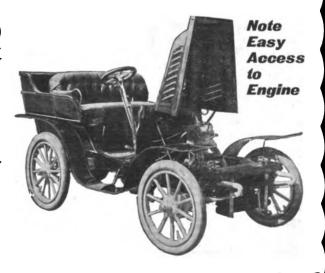
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We have a device that anyone can use successfully, and it should surely stimulate the use of Single Tube Automobile Tires. We shall be glad to furnish a complete kit for \$2.00 and ship it to you on trial, to be returned if unsatisfactory.

We are making the best continental type of Detachable Tire on the market—patents pending. When you think it over, don't let anyone persuade you that any Detachable Tire can be easily removed and repaired on the road. It is a difficult piece of work for an expert.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, May 15, 1902.

No. 7

SCORCHERS FACE CHANGES

Automobile Club Takes Sensational Action Against Three Members—Expulsion Possible.

The scorching which marked the recent Long Island endurance test has been followed by unexpected, almost sensational developments.

Without warning or intimation that such action was in view charges have been preferred against three members of the Automobile Club of America who were in the scorching brigade—Dr. J. Grant Lyman, Kenneth A. Skinner and Edward B. Gallaher.

The charges were preferred by the Committee on Enforcement of Laws of the organization, which was instituted some four weeks since. This committee comprises President Shattuck, Sidney Dillon Ripley and George F. Chamberlain, chairman of the club's law committee. They accuse the parties named of having violated the State law by driving their cars in excess of twenty miles an hour during the endurance test in question. The offenders have been cited to appear before the Board of Governors in their own defense on May 23.

It will be recalled that for nearly a year the Automobile Club has had a resolution on its books, threatening offenders of the law with expulsion. Although several times occasion presented when the resolution could have been brought to bear, no action was taken. Whether the governors will in the present case enforce the resolution and expel the members referred to remains to be seen. It is practically certain, at any rate, that discipline of some sort will be meted out.

For the purpose of restricting the use of automobiles in the business portion of the city, it is stated, the Waterville (Me.) ordinances have been amended so as to include vehicles propelled by steam under the fast driving clause.

The office of the National Battery Co., at 91 Fifth avenue, this city, has been closed.

Looks for a Compromise.

No effort was made to bring about a vote on the ordinance increasing the speed of automobiles from 8 to 10 miles per hour in this city on Monday, when the meeting of the Board of Aldermen was held. It was stated by Alderman Oatman, its introducer, that he did not press the matter, as he felt that an ordinance satisfactory to nearly all concerned could be framed in place of the pending one. Such an ordinance would provide for two or more rates of speed, the lowest being in force downtown and the highest in the suburban districts.

St. Louis has a Club.

The Automobile Club of St. Louis has been organized, it succeeding the St. Louis Automobile Club, a temporary organization which had its origin in a movement against an obnoxious speed ordinance. The new club starts in with thirty-five or forty members. It was formed at a meeting held at the University Club, and a highly successful career seems almost certain to be its lot. Dr. E. M. Senseney was elected secretary.

Names of Weight.

Names notable in many walks of life were added to the membership rolls of the Automobile Club of America last week. Among them were August Belmont, Alfred Gwynne Vanderbilt, A. W. Rossetter, John W. Gates, Henry C. Frick, J. F. O'Shaughnessy and Frederick Southack.

Also a Kilometre.

It has been decided by the Automobile Club of America to add a trial at a kilometre to the list of events planned for May 31 at Staten Island. This is done to afford a standard of comparison with the foreign vehicles at the regulation short distance of the latter.

Funke Fire Stricken.

Fire destroyed the establishment of A. H. Funke, 101 Duane street, New York, dealer in motors, sporting goods, etc., on Tuesday. A considerable quantity of ammunition was stored in the place, and added to the dangers the firemen encountered in fighting the flames.

MILWAUKEE GOES UNDER

Makers of Steam Vehicles of That Name Fail— Result not Unexpected.

A receiver has been appointed to take charge of the affairs of the Milwaukee Automobile Co., Milwaukee, Wis. The Wisconsin Fidelity Trust and Safe Co. was selected as temporary receiver, and entered upon its duties last week.

The appointment was brought about by the action of four of the concern's largest creditors—the Diamond Rubber Co., the Kelley Handlebar Co., the Bridgeport Brass Co., and the Marine National Bank of Milwaukee. They filed a petition in involuntary bankruptcy against the concern, and the court took the action noted.

It is stated that the liabilities are about \$46,000, with nominal assets of \$30,000. The receiver has been authorized to conduct the business for the present, operating the factory and disposing of the stock in hand.

The Milwaukee Automobile Co. manufactured steam vehicles and had been in business for several years. A short time ago it brought out a heavy steam car, designed on the lines usually adopted for the gasolene type. The failure causes little surprise in the trade.

Annex at Garden City.

A clubroom in the Garden City Hotel, Garden City, Long Island, has been secured for the exclusive use of the members of the Automobile Club of America. Such members will have all the privileges of the hotels, including swimming pool, shower baths, billiard room and charging and storage facilities.

It is said that the new gasolene car which the Overman Automobile Co. is building for A. L. Riker is almost completed and will be entered in the Staten Island contest.

The Police Department of Atlantic City. N. J., have placed an order for a patrol wagon with the Electric Vehicle Co.



The Motor World.

GOVERNMENTAL NOTICE

Given to Inhabitants Along the Route of the Alcohol Test Race.

French Bureau Motor World,

2 Rue d'Abbeville.

Paris, May 2.—The matter which is now mostly occupying the attention of automobilists is the forthcoming alcohol race being organized by the Minister of Agriculture, and makers who have been disappointed over the Abbazia race are preparing their vehicles for the new event with the assurance that they will not again find themselves put to useless expense.

Arrangements are so far advanced that the Minister has issued notices in all the towns and villages along the route informing the inhabitants of the time when the racing vehicles will pass, and inviting them to take precautions, especially in the way of keeping children and animals off the road. Drivers of horse vehicles are also told to keep to the side of the road, even when there may appear to be no automobiles close at hand. Moreover, the route will be patrolled by soldiers, who will have orders to keep everybody and everything off the highways during the time the racing vehicles are expected to pass. The Minister does not mean to have the race spoiled by accidents, and it is to be hoped that the success of the event will show the public that speed events can be organized without the slightest danger to any one, and that this experience will put an end to the croakings of those to whom the suggestion of an automobile race is like a red rag to a bull.

NEARLY ONE HUNDRED ENTRIES.

There are close upon a hundred vehicles engaged in the Northern Alcohol Circuit. Nearly all the makers will be represented, Panhard et Levassor having entered no fewer than a dozen carriages, and several new vehicles will be running for the first time. Mors are making special preparations, and are completing two types of vehicles, but there has been a great, deal of exaggeration over the powers which it was said were being put into them. Not so long ago they were talking of 75 horsepower motors, and it was on account of the difficulty of cutting down the weight that Mors were not ready for the Nice meeting; but it now appears that the big machines will have engines of 35 horsepower, which probably means 45 horsepower indicated, so that they are not far short of the powers put into the Panhards and the Mercedes. The makers think that the vehicles will be the fastest yet turned out, on account of the more economical transmission employed. The gear has been entirely changed, and, curiously enough, its principle has something in common with the transmissions that have proved so successful on some of the volturettes and light carriages. On the top speed the drive

is direct to the differential, which is now on the countershaft, and there is thus an economy of power as compared with the old system, where it was taken through a fourth pair of wheels. Mors have cut down the weight of the vehicles considerably and have simplified them in every possible way. Their performances in the coming race will be looked forward to with a great deal of interest. In the light racing automobiles they fit engines of 22 horsepower.

SERPOLLET FILLING ALCOHOL BURNERS.

Serpollet is also making preparations for the big event, and as only vehicles using alcohol can compete he is fitting burners employing that spirit. Of course, the great difficulty lies in the possibility of the burners choking up, though there is no reason for believing that it will be worse than with kerosene, which necessitates the occasional application of a pin to clean out the minute holes of the burner. Perhaps the forthcoming race will throw some interesting light upon the suitability of alcohol as a fuel for steam carriages. Mr. W. K. Vanderbilt has entered his new Mercedes-Simplex, so that we shall see at least one big foreign carriage in the race. It is to be hoped that there will be more, for curiosity is very keen to know whether the Germans are able to produce faster vehicles than Panhards and Mors. Kriéger is also going to run one of his electric carriages. Probably you may ask. What has electricity got to do with alcohol? Kriéger has succeeded in associating the two, and squeezing within the regulations, by charging his batteries with a dynamo driven by an alcohol motor!

RACING OUTLOOK MORE HOPEFUL.

What effect will all this have upon the future of racing? It seems to be making the outlook much more hopeful, because, in the first place, it is giving a sort of official status to automobile speed contests, and if the government can successfully organize races, why should it not be done by the big clubs who have the assistance of the local authorities in taking precautions against possible accidents? It is clear, however, that races cannot be promoted unless this assistance is obtained, for the arrangements cannot be less complete than those being carried out by the Minister of Agriculture, and if the road is to be patrolled by soldiers the government must also take an active part in organizing these events. Whether the government will care to take this responsibility upon itself remains to be seen. If the Northern Circuit proves a success, and goes off without the slightest accident, there is some chance of the government changing its attitude toward automobile racing generally, which attitude was only dictated by political reasons so as not to alienate the small party who are opposed to racing in any shape or form; but now that the elections are over and the same government is coming into power, it will not find itself tied down to its old policy, and therefore the experience of the Minister of Agriculture as an organizer

of races may lead to the government dealing a little more leniently with the clubs.

MORE TO BE KNOWN IN A MONTH.

Supposing that races be authorized, all that we can look forward to is the holding of one or two big events a year as a means of testing the vehicles and showing the progress being made by the industry. It must be recognized that automobile racing on the highway as a sport is dead and cannot be revived, now that the excessive speeds necessitate such extraordinary precautions, but as a means of testing and advertising automobiles and enabling makers to gain experience which will be very valuable to them in perfecting motor vehicles, it is possible that they may still be continued, though confined, perhaps, to one big international event, and also, it may be, to the classic Paris-Bordeaux and Gordon Bennett Cup race. As to this, however, we can only possess our souls in patience and wait until after the Northern Circuit. Within a month we shall know what will be the fate of automobile racing in this country, whether it is to be entirely suppressed or tolerated within very narrow limits. I may say that automobilists here are very doubtful as to the issue.

PLAYED DUCKS AND GEESE WITH THE EVENT.

At last we have got hold of the true cause why the Nice-Abbazia race was suppressed. It will be remembered that the event was officially sanctioned by the Minister of Public Works, who, it appears, really had the support of the government, and all arrangements were carried out, in view of the race, to the extent of drafting soldiers to different points of the territory to keep the course clear. While this was going on the Minister of the Interior, who is boss of everything appertaining to the internal administration of the country, went for a holiday in the country, and happened to stay at a place on the route over which the automobiles were to race. A German vehicle, driven, it is said, by a Frenchman, tried the course at racing speed, and after annihilating sundry ducks and geese knocked over a cart, killing one of the occupants. The howls of indignation came to the ears of the Minister of the Interior, who found his holiday disturbed by complaints and recriminations from those who had lost their ducks and geese, and rather than run the risk of provoking a revolution he gave orders at once to prohibit the race. The famous telegram was at once dispatched the club at Nice, and the soldiers were sent back to their quarters; and thus a fatal accident and the loss of a number of ducks and geese, through the foolhardy recklessness of an automobilist, suppressed what promised to be one of the biggest and most interesting races in the history of automobilism.

There is a project on foot to have the Chicago Automobile Club turn out in a body on June 21, "Derby Day," at Washington Park. It is thought that nearly one hundred vehicles will be in line.



CLEVELAND AS A CENTER

Additions Being Made to its Already Long List of Manufacturers.

Cleveland, O., May 12.—This city, long since famous as an automobile centre, and the home of several vehicles, each a star in its class, and including in addition such concerns as the American Ball Bearing Co., the Standard Welding Co., the Automobile and Cycle Parts Co., Kelly generators and other accessory and parts companies, is to be still further enriched by the accession of a number of new concerns, each, as is usual with Cleveland companies, provided with strong financial backing.

Most prominent among these will probably be the A. L. Moore Co., a name that will be readily recognized by those of the trade who are familiar with the history of the bicycle business.

The A. L. Moore Co. will be formed—in fact, is practically formed now—and will place on the market a two passenger gasolene car weighing between 800 and 90% pounds, equipped with about a 6 horsepower single-cylinder horizontally placed motor, and will aim to carry out the idea of a roomy, well positioned runabout with long wheel base, all machinery hung on the running gear and generally simplified to the greatest possible degree.

WILL BUY MANY PARTS.

An experimental car, the work on which was done at the factory of the Cleveland Machine Screw Co., is now out, and is being thoroughly tested, with results that are said to be very satisfactory.

It is not the intention of the company to attempt to build "from the ground up," but, on the contrary, to do more of an assembling business, buying only such parts as are known to be thoroughly reliable, and making them up into one harmonious whole. In following out this policy Mr. A. L. Moore is only practising what he long preached as a parts maker. Material for one hundred vehicles is being purchased, and the work will be rapidly pushed as soon as the final details of the car are decided upon.

The Hansen Automobile Co. are, as Neighbor Winton kindly expressed it, much further along than a whole lot of concerns which have made a great deal more noise. Their product is a substantial, clean-cut looking touring car, which, however, only weighs in the neighborhood of a thousand pounds, and which has already attracted much favorable comment. The company will probably be enlarged, its name changed and preparations made to market a fair number of machines.

The American Motor Carriage Co. is another Cleveland concern with the Cleveland characteristic of not letting any grass grow under its feet.

Located on East Prospect street near Mad-

ison street, in a select residential section, the casual visitor looks in vain for any signs of a factory anywhere near the address given. Coming up to the number, he stops before a single story, square, storm front office built onto what appears to be a substantial looking wooden dwelling house.

A large plate glass window shows an office inside, and the visitor mentally concludes that the offices only of the concern are located here. As he enters everything bears out this supposition, and yet the impression is not exactly that of entering an office, but more that of coming into a cosy, homelike club.

ONE SURPRISE FOLLOWS ANOTHER.

There are a succession of surprises in store, the first of which one gets when, upon inquiry for Mr. Frank Dorman, you are told that he is "back in the factory somewhere." but will be called. A recollection of the outside appearance of the building and another glance around the office, with a peep into a luxurious looking inner room, half office and half writing room, and you conclude that here must be a man with some money who has probably fitted up a place in his home and imagines he is really building automobiles in a serious way.

But in comes Mr. Dorman, and your theories are knocked galley west, for he looks like a man who works, and works to some purpose. Manufacturing? Yes, he's making gasolene and electric vehicles; the former has just emerged from the experimental state, and is now "right"; the latter has been satisfactory for some time, he tells you. You doubtingly make some remark about the factory; he breaks into a smile, and with a "Come on, I'll show you one of the greatest joints you ever saw" he leads the way back, and in a moment you're on the ground inside of a big one room building.

In front of you and across a driveway a solid floor a few feet above the ground is covered with screw machines, lathes, drills, etc., on which a number of men are busily working. Parts, material, etc., are being turned out and finished, and you recognize the nucleus of a well arranged, fair sized factory. You see the completed "first car" as well as an electric stanhope, and both look well and carefully made.

MANY NOVEL ARRANGEMENTS.

Mr. Dorman opens a door and you see where a rig can be run from the street and stored in the unoccupied portion of the building, which will accommodate quite a number. A charging plant is noticed in a convenient corner.

You follow Mr. Dorman to a room where batteries are being manufactured—an eye opener, by the way—but you see for yourself, and, sure enough, there they are, and in fair sized numbers, too.

You get upstairs somehow and into a big room which reminds you somewhat of a museum. It is divided into large cabinets, or chapels, raised a couple of feet from the floor. This is to be the show room, you are told, and into each cabinet a vehicle is to be placed, the finishings of cabinet and carriage to harmonize—a novel idea, surely. Along you go and into a model toilet and bath room, which you are told will be fitted up as a den, and then, as you conclude that your inspection is about completed, you are ushered into a cosy little dining room and back to a large and well appointed kitchen with stationary ranges, etc.

MAKING MATTERS CLEAR.

As may be imagined, by the time you get back downstairs you are blinking and wondering where such a combination comes in for a concern that is supposed to be manufacturing automobiles, until a few words from Mr. Dorman set it all clear.

"It is our intention to dispose of a considerable portion of our output locally, and in addition to do a general storage business," he says. "We not only intend to take care of the vehicles, but to provide for the comfort of their owners. We got hold of this place, which seems admirably adapted for the requirements of 'man and beast,' and we're going to make it as attractive and comfortable as possible. We expect it to be its own best advertisement."

All this is cited as a unique illustration of Cleveland enterprise.

There are two or three other concerns here which are putting through from six to ten jobs each, but who are averse to having any publicity at present.

Dijon to Have a Congress.

June 6, 7 and 8 are the dates set for the holding of an automobile congress at Dijon, France. It is being organized by the Bourguigon Automobile Club, and already the support of the A. C. F. and all the leading French provincial clubs has been promised.

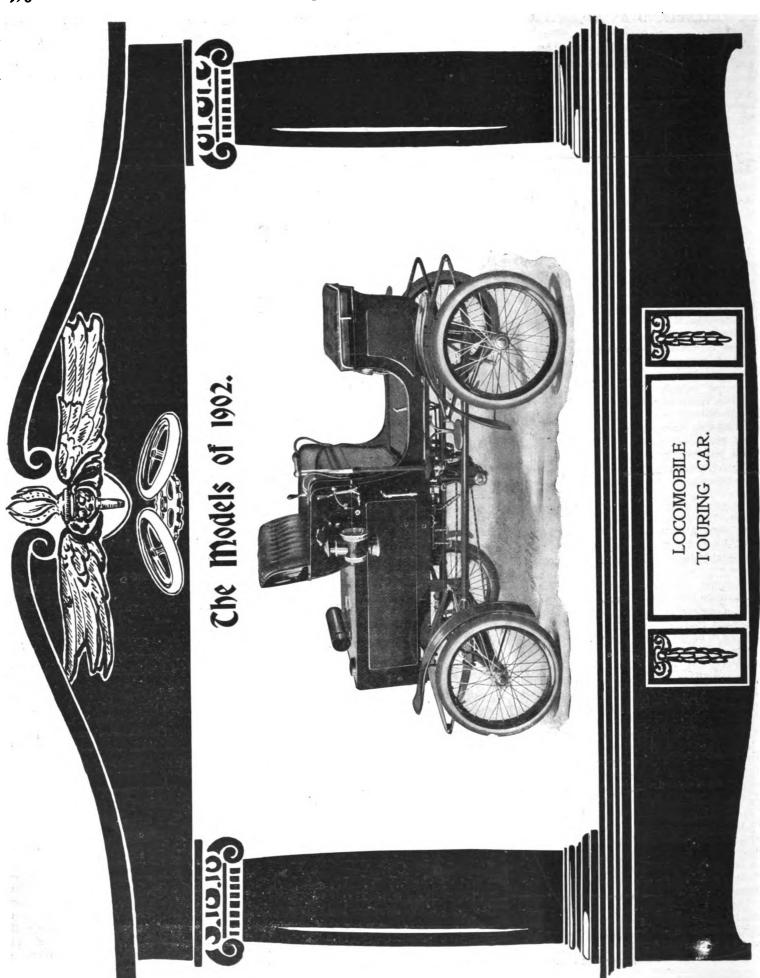
Among the many papers to be read at the congress are the following: "The Maintenance of Roads," by M. Forestier; "Railway Transport Rates for Motor Cars," by M. Jeantaud; "Hotels," by Dr. Leon Petit; "Automobile Legislation," by M. Du Laurens de la Barre; "Motor Car Mechanicians," by M. Mirand-Devos; "Carriage Work of Touring Motor Cars," by M. Auscher, and "Motor Car Insurance," by M. H. Cottereau.

In connection with the congress a fete and a number of interesting excursions are being organized.

Milwaukee Club's Plans.

Ambitious to a degree is the programme mapped out by the recently organized Milwaukee (Wis.) Automobile Club. The preliminary meeting was held last week, and a committee was appointed to frame a constitution and bylaws to be submitted at the next meeting. The club will have a charter membership of at least fifty, who must own automobiles to be eligible. Clubrooms will be maintained downtown and clubhouses will be built, one at Fox Point and another between the city and Racine.





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Published Every Thursday

By

THE GOODMAN COMPANY

123-:25 TRIBUNE BUILDING.

154 Nassau Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Leaden Office, 53 Fleet Street, Paris Office, 2 Rue d'Abbeville,	:	:	C. V R. F	V. BI COL	ROWN. LLINS.
Subscription, Per Annum [Postage	- Pa	id]			\$2.00
Single Copies [Postage Paid] .					Cents
Foreign Subscription					\$3.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the scaling and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N.Y. Post Office, November, 1900.

NEW YORK, MAY 15, 1902.

Cheapest Vehicle in the World.

Trolley cars, usually looked upon as the cheapest conveyances in existence, must take a back seat.

The motor vehicle can give it cards, spades and a beating. Figured on the basis of the cost of transportation per passenger per mile, it comes out considerably in the lead, even when the comparison with this, its most formidable, rival is made.

At the ruling price of gasolene, say, 12 cents per gallon, the fuel cost of running the winner of the light gasolene class 100 miles in the endurance run of the Long Island Automobile Club was but little more than one-third of one cent per mile. As there is no reason to regard the consumption on this run as remarkable—the high wind probably adding to the amount of gasolene used even with the vehicle under discussion—it is but fair to regard it as an average performance.

As such it would probably be impossible

to duplicate it on any trolley line in this or any other country.

On the other hand, comparison with any other vehicle is, of course, absurd. The steam roads seldom get below two cents per mile, and the horse is many times as expensive as this.

In short, the test makes plain what was well understood before, but which now receives the stamp of an official finding.

For that, if for no other reason, it is worth many times the labor involved.

The Human Crank.

This peculiar species of animal—may the lords love him!—exhaled an unctuous joy when he first saw the automobile. He looked upon it with a baleful, beaming eye, the eye of the deadly, all-embracing octopus, and said: "'Tis well, 'tis mine."

The first autos were awkward, complicated, stodgy, unsightly and dozens of other things too numerous to mention. But they embodied an idea, a splendid, sparklike idea. the speed-spirit, the man-horse, the one who is all in all-director, controller, flyer. This leaping quality caught the crank, and he gratuitously volunteered to godfather the new and anomalous breed and to cajole and evolute it into a world-wide beauty and utility. Yes, the Crank-that impossible person, that triangular man-burning for novelty and research, made the auto his own; and to his indefatigable enthusiasm are due many little steps and not a few radical big steps in auto-evolution.

In ordinary life the Crank is unbearable, to be sure. The fall of government, the state of tariff and all State, national and international movements are nothing to him. When you tell him that your dearest friend is dead, or that your worst enemy has become suddenly enriched, he quits you as a person upon whom news of the very latest and best thing in brakes (his discovery) would be sheer wastage.

But the Crank, as every atom in the cosmos must, discharges his appointed functions. The Crank is by nature an extremist; he is highly charged with the oversoul; he is a born believer, and he would have loved Mohammed. His overnature carries him oftentimes beyond the mark; but he has drawn with him, comet fashion, a train of followers, and these, perceiving his sensational orbit, drop off at Sanity Point, and thus we have something useful and practical.

Such is the mission of our friend the

Crank. He is one grand cocktail in the depressing business of life; he stimulates the dejected and puts the breath of life into high discouragement. So let him bore you, this Crank. Be briefly his victim. Later you will have a revenge; you will enjoy the good things Mr. Crank has helped make possible.

The Case of Mr. England.

The case of Mr. I. W. England, who drove car No. 71 in the Long Island endurance run and who was disqualified for exceeding the speed limit, is peculiarly unfortunate.

Mr. England's entry was actuated wholly by the spirit of the sportsman. Trade or selfish interest did not enter into it, and, as he himself claims, he had no object in endeavoring to see how fast he could cover the course and made no effort to do so. He is so particularly insistent that he has no wish to remain coupled with those who violated the rules and the law that his protest is deserving of heed and is not without merit.

His disqualification is based on the time as taken by the official timekeeper at the start and finish. The report of the observer who accompanied him and who was no less an official of the club is permitted to go for naught. It transpires that the observer is a gentleman of position and reputation, and he is as insistent as Mr. England himself that the time as rendered by himself is correct, and as the Long Island Club made no effort to follow its own rule requiring observers to compare watches with that of the official timekeeper at the start, some blame attaches to the organization itself.

It must occur to most men that if the observer was competent to time the stops on which awards were based, his time for the completed 100 miles merits more than respectful consideration. It would appear that the interests of justice and fair play will be served by reopening the case.

Outlook for Foreign Racing not Bright.

It is possible, now the general elections have been held in France and the present ministry returned to power, that there will be a change of policy in regard to automobile racing.

Such a change is badly needed. Without it the outlook is gloomy in the extreme. As our Paris correspondent shows clearly, matters are at a complete standstill, not even the Paris-Vienna race, the date for which is a now close at hand, being a certainty. It is true that in its case the hitch comes from



The Motor World.

Bavaria, but it is scarcely to be doubted that the spirit of antagonism displayed by the French government has had something to do with the hostile stand of the Bavarians.

As to the Paris-Bordeaux, and even the Gordon Bennett cup race, nothing refinite has been done toward clearing away the obstacles which stand in the way of their being run off.

The only event that is at all certain to eventuate is the Northern District alcohol trials, and these are far from being racing events pure and simple. They are, rather. a series of tours, their chief object being the encouragement of alcohol manufacture by the farmers of Northern France.

It would be a great pity if racing on the Continent were to come to an untimely close. So much good has resulted from it in the past—and so little harm—that this would be deplorable whether viewed from the sporting of the business standpoint.

Let us hope, therefore, that matters will soon take on a more encouraging aspect and that governmental hostility will be lessened or disappear entirely.

Calling a Halt.

Immediately after the passage of the Cocks bill at Albany the Motor World quoted Chairman G. F. Chamberlin of the Law Committee of the Automobile Club of America as saying that it yet remained to be seen whether the mere word or finding of a perhaps prejudiced policeman or magistrate was sufficient to send an automobilist to prison.

This, week the matter in one of its shapes came before a court of standing, and was promptly decided in the negative.

It was the opinion of Recorder Goff that a case of this sort could not be decided by a mere committing magistrate. It must, he said, come before the Court of Special Sessions, the magistrates sitting in the police courts having no jurisdiction. He therefore reversed a decision of one of the latter who had fined an automobilist accused of illegal speeding.

It was full time that something was done to bring home the responsibility for the arrests that have been made so plenteously and the subsequent charges filed.

It was very easy to lump all automobilists with the few reckless and lawbreaking ones and to put in operation the wheels of the law mill to grind them to pieces. The result could have been foreseen. In nearly every case the class aimed at escapes and the innocent and well intentioned motor vehicle user

is made the scapegoat for him. This could be endured if it only happened occasionally. But when a regular crusade is inaugurated, and a considerable portion of the police devote themselves to the surveillance of motor vehicle users, annoying and harassing them in every possible manner, and literally making their lives a burden, it becomes almost intolerable.

The second step in the persecutions thus undertaken is, if anything, more disheartening than the first.

Taken before the magistrates, these alleged offenders are builted and browbeaten in the manner usually employed in the case of admitted malefactors. Frequently a hearing is denied them, and if they insist on their inalienable right to be heard in their own defence they simply aggravate matters and get a scoring in addition to the fine. The latter can almost always be regarded as a certainty.

A prosecution regularly entered upon and carried through in regular order, such as will now be necessary, is quite a different matter from the police court travesties we have seen.

Making Statutory History.

The automobile is making statutory history with a vengeance, and, up to date, England is the principal contributor. On this side of the pond violations of automobile law are quickly disposed of. In case of accident the victim of fast driving or unskilful handling of the machine is soothed and stilled with the universal American panacea, money, or, if the autoist is arrested for "fast driving," he "takes his medicine" and blithely goes about his business. Not so in Britain, however. Your average Briton has a portentously dignified opinion of his rights. If he is arrested for violation of a law of the road he wants the inquiry conducted on a scientific basis, and he will fight the case to a finish. He holds not his checkbook in the hollow of his hand, and also, be it said to his credit, his chief anxiety is not freedom at any price, but a stubborn purpose to prove himself in the right.

Only a few weeks since English autoists were deeply interested in and much disturbed over the outcome of two "dangerous riding" cases, which on appeal threw into strong light the futility of certain auto highway ordinances, while the findings indicated a certain degree of obfuscation on the part of two learned justices. Case one was an "arrest for dangerous riding." Defendant admitted that he was riding twenty miles in

the hour, but on a lonely road upon which was neither traffic nor passanger of any sort whatsoever. Defendant therefore held that while he was riding "fast" he was not riding "dangerously so," and, because the highway was absolutely deserted, there was no possibility of danger. Mr. Lord Chief Justice Darling held against him. In connection with this case American lawyers will be interested in the following decision by the late Chief Justices Willes and Keating, who held "that where a person was charged with lighting a fire within fifty feet of the highway to the injury of the same, or to the injury, interruption or personal danger of persons travelling thereon, it is not enough to prove that the fire was lighted, but there must be evidence of the injury, interruption or personal danger of such persons."

Of course, the meat of the contention is that "fast" riding may or may not be "dangerous" riding, and that danger and injury must be proved. In case No. 2, another "fast riding" case, a constable held that he caught the pace with the second hand of an ordinary watch. The defendant was found guilty, the Lord Chief Justice holding that the speed of an automobile could be taken in this way, which is, of course, entirely ridiculous. The findings in these two cases clearly indicate that the laws of the highway as applied to automobiles are at present unsatisfactory and entirely fail to fill the bill.

Whatever shortcomings are to be laid at the door of Malcolm W. Ford they are in great measure atoned for by his death. The terrible tragedy which last week ended the feud existing for so many years is to be deplored from every point of view. But it should not be forgotten that the active agent in it faced the end with the same fortitude and courage that he had fought the battle for existence, and whatever sympathy is hestowed on the fortunate brother a portion of it should also be given to the unfortunate one, who had been deprived of his inheritance and nearly everything that goes to make life worth living. His good qualitiesthe unfailing courtesy of his manner and his gentlemanly bearing-will be longest remembered.

On the ground that the witnesses for the prosecution were "respectable persons" whose testimony could not be disbelieved, no matter how improbable it was, an English judge fined an automobilist for "furious driving."





Never could understand how a man could lose an automobile. Every day or so you read about a motor vehicle, bearing this collection of initials or that, being found unclaimed in the public streets and taken to the station by the honest police who find it. I am about as forgetful as most men, but, bless my soul! if I got so I couldn't remember my automobile when I left it standing in the street I believe I'd tie a string around my finger or do something else to keep my remembering apparatus from slipping a cog.

To the British Empire, greeting! Know all men there by these presents that the redoubtable liquid air, expert financiers and wonder workers have, owing to circumstances at home over which they regret they have no control, concluded a change of location and other things would be beneficial. and have therefore decided to honor the English people with their presence and their palaver. Here in America investors of the I-believeanything-you-tell-me variety have found an acquaintance with the liquid air people something very much more disagreeable than it was profitable. Full page advertisements now appearing in the English trade papers may temporarily induce some of their editors to hold their peace in regard to these liquid air people and their allegements, but it is nevertheless the duty of every honest man to expose charlatans at the earliest possible moment.

Nothing has hurt the automobile more than its Penningtons, Triplers, Lawsons, et al., and neither they nor their successors should ever again be allowed to get back into the game. Here in America liquid air has been conclusively proven to be first cousin to liquid moonlight; a thing for schemers to play with and wise men to religiously leave alone. In the hands of its exploiters liquid air has no future, while its past is one that its exploiters would prefer nothing at all should be said of. If the English public, automobile or otherwise, is airily tripplered out of its money it will have only the criminal silence of its trade press to thank for the loss. No editor of a trade paper worthy of the name can plead that he does not know the disastrous record of liquid air promotion. It is not stating the case too strongly to say that with their records before him no sane man would leave even a red hot stove alone in the care of these liquidizers if the stove was not chained and bolted down in some manner which would make the matter of its removal an absolute impossibility, even at the hands of such expert lifters as these liquid airers have proven themselves to be.

Entirely too often the purchaser expects in the vehicle of his choice the carrying capacity of a freight steamship along with the speed of a torpedo boat. As expectations are rarely in anything equalled by realizations, the crop of disappointments in automobile purchasing is not destined to an early decrease, so far as I can see.

We are great people! You can't beat us, and, try as you may, you can't even deadheat us! Hurrah for Uncle Sam, the American Eagle, and so forth, and so forth! Now, it has been decided by this great republic that if you import any part of the equipment of an automobile, say, lamps, for instance, pay the duty on them and then take them with you to Europe on a vehicle, when you return. bringing them back to this country, you must pay the original duty on such articles all over again! Don't ask me why. Don't even say you think this an imposition. This glorious country of ours has got to be "protected from European pauper labor" even if Castle Garden has to work overtime three hundred and sixty-five days in the year letting that same European pauper labor flow in to the country to aid us in the protecting. As I said in the beginning, we are great people, and the administration of our tariff laws is a living proof of our greatness!

In choosing a motor be careful not to pull the wool over your own eyes. Same advice will be found good when making a decision in any other direction.

. . .

At the conclusion of a recent interview concerning the automobile, United States Senator William A. Clark, of Montana, said:

"As a time saver I have adopted the automobile. As a time saver it is bound to be almost universally adopted, as it has distanced the horse to the same appreciable extent that the electric car distances the old street car. An automobile can be operated at the rate of fifty miles an hour, and is so rapid that it will naturally be largely employed by people who wish to economize in time."

Wonder if the Senator remembered all this when he was caught by a Washington policeman trying "to economize in time" by sending that automobile of his along at a gait faster than the law allowed, which attempt at economy eventually cost him \$25 in a police court? This is a queer world, my masters! You never can tell from where you sit what the police or the public will do with you when they take a close personal interest in you and your performances.

We are apt to distrust people who flatter us on our control and knowledge of an automobile, and to dislike those who do not.

. . .

. . .

Let me introduce to you an eminent jurist hitherto unknown beyond the narrow confines of Yonkers—Judge W. C. Kellogg, gentlemen! On the tablets of your memory let the name of Kellogg be deeply graven, for he is destined to high honors in the lengthening list of those who believe no man is fit to occupy a position of public trust

who does not upon every possible occasion let the public know he is a blatherskite. In fining an automobilist who had been brought before him charged with proceeding through Yonkers at a speed in excess of eight miles an hour, this famous jurist, this upright and fearless judge, took occasion to declare himself in this fashion:

"Apparently the rich do not care what happens to those who get in their way. A little boy, a girl, an old man or an aged and bent woman would meet a like fate beneath the wheels of a racing automobile. The fact that the drivers of these automobiles are rich and of social prominence has no weight with me. I would fine a Vanderbilt or any other rich man as soon as I would a poor man. I can foresee a great social revolution unless there be a change in the attitude of the rich toward the poor."

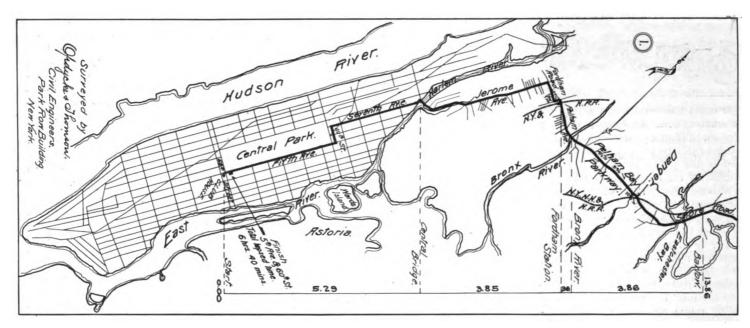
No one denies that all men who break the laws should pay an equal penalty, regardless of their wealth or poverty; but when a judge, even a Yonkers one, so far forgets the dignity of his position as to talk like this W. C. Kellogg one, it is time to call a halt. The inference plainly attempted to be conveyed by the Yonkers official's attack upon automobilists is that automobilists are all rich, and therefore the lives and limbs of those who are not rich like themselves are of no consequence to the automobilists when they are driving upon the road. It is such uncalled for and absolutely untruthful statements as these which may bring about a class hatred the dire results of which no man may see. Should such a thing happen, those who, like Judge Kellogg, have been responsible for the arraying of the masses against the classes will have much to answer for. According to Kelloggian logic, none but the rich own automobiles; owning an automobile and being rich at once deprives you of all respect for the law. or consideration for the lives and the limbs of every one else. Could anything be further from the truth or more akin to the teachings of a Most or the professed belief of a Czolgosz?

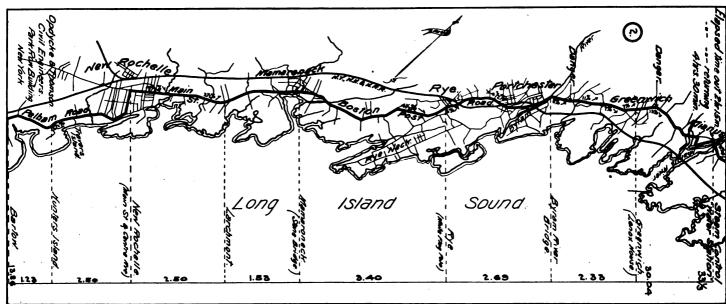
True nobility is invulnerable; wish tires and boiler tubes were.

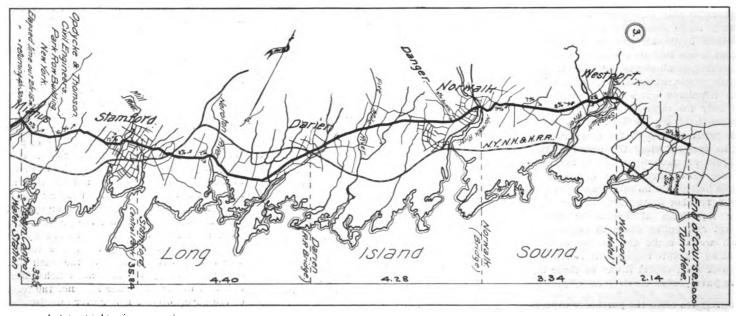
I see by the papers that a young millionaire has just won \$5,000 by driving a trotter over fifteen miles of Westchester highways in less than 54 minutes. If I was a carping critic I might point out the illegality of any such performance, to say nothing of its brutality as well. There is this much to be said in favor of the scorching automobilist as against his confrere, the road racing horseman: the automobilist gains his enjoyment from a speed which is not the product of a poor, suffering brute cruelly driven by an unfeeling man to gratify the man's vanity. The horsepower begotten of the flash and that produced by the lash are much different, and in the difference lays not the least of the superiority of motor over muscle.

THE COMMENTATOR.









COURSE OF THE AUTOMOBILE CLUB OF AMERICA'S NON-STOP CONTEST, MAY 30, 1902.

The Motor Morld.

RULES ARE RIGID

No Stops, no Speeding, Allowed in Bridgeport Run-Map of Course.

Arrangements for the 100 mile non-stop endurance contest, promoted by the Automobile Club of America, are nearing completion. The event will take place on Decoration Day, the start being set for 8 o'clock in the morning.

The high standard the club has set up is evident when it is seen that certificates of award will be given only to such vehicles as finish the 100 miles without a stop of any kind, except what are termed involuntary ones and, in the steam and electric classes, those made for supplies. In other words, only those vehicles making a perfect record will figure in the awards.

One important and several minor changes have been made in the rules since they were made public a number of weeks ago. The first change is the reduction of the time in which the 100 miles can be covered without incurring disqualification from 7 hours to 6 hours and 40 minutes.

This figure is based on an average speed of 15 miles an hour over the entire course. This is deemed a satisfactory figure, in view of the fact that the legal maximum rates of speed along the course are 8, 15 and 20 miles an hour, respectively. In Greater New York, New Rochelle and a few towns and villages the 8 mile limit is enforced and must be strictly observed in this run. Outside of these limits, however, and where no other speed ordinances are in force, an extreme speed of 20 miles an hour is permissible in this State. Upon crossing the line into Connecticut, however, the maximum speed becomes 15 miles again.

The time limit of 6 hours and 40 minutes thus imposed will be rigidly enforced. That there may be no misunderstanding about it, the matter will be plainly set forth in the corrected rules, which are now in press. Furthermore, the official map of the course, which is reproduced, contains the statement that the 331-3 mile point must not be reached inside of 2 hours and 15 minutes, or the 662-3 mile point in less than 4 hours and 30 minutes.

It will be observed that there are but two controls, both of them at the same place, Mianus, which is 33 1-3 miles from the starting point on the outward trip, and 66 2-3 miles on the homeward bound one. In addition to this, the points where the 8 miles an hour speed must be observed will be designated by flags. Upon entering one of them a green flag will be encountered, while a white flag will mark the point where the increased speed may be again resumed.

The convenience of using Mianus as the control station, and also as the point where supplies are taken on by the steam and electric vehicles on both the outward and inward trips, is apparent.

The entry list is slowly filling up, the

number now exceeding a score. From the inquiries for blanks and other information which have been received and the interest displayed in the contest, it is confidently expected that the list when completed will considerably exceed 100.

The course is from the clubhouse, 58th street and Fifth avenue, New York, to a point just west of Bridgeport, Conn. This point is exactly 50 miles from the clubhouse, and the return journey will be made over the same route. New Rochelle, Grenwich, Stamford and Norwalk are the principal places passed through, the old Boston Post Road being followed for the greater part of the distance.

Liked the Liquor.

It is well known that wood alcohol is not safe from the depredations of hardened topers, who will sometimes drink it in the absence of something more tempting. The denaturalization of the alcohol used in explosive motors is supposed to make it proof against a similar fate, but it is doubtful



whether it will do so in all cases. The fate of an alcohol motor vehicle "held up" by a band of thirsty topers is thus amusingly depicted by a German contemporary, and it seems pretty plain that there will not be enough of the precious fluid left to take the car to the nearest town. Burglar proof tarks will have to be fitted if such things as this become common.

Interesting to Porto Ricans.

The new automobile transportation line in Porto Rico appears to be in successful operation. Three carriages have been placed in service between San Juan and Ponce, and the Automobile Transportation Co. of Porto Rico hopes to add more vehicles for the daily service of carrying passengers and express matter. The machines used are of the gasolene type, and whereas it formerly cost \$18 for a trip on the horse drawn coach a traveller can now make the journey in an automobile for \$7.50. The natives have not taken kindly to the modern vehicle, according to Colone! Charles K. Darling, a United States marshal, who recently returned from the island. He says that while on one of the carriages the supply of gasolene became exhausted, and the natives stood around and shouted gleefully over the machine's inability to move.

FIFTEEN AND TEN

Miles per Hour are Legal Rates in Bay State— The Bill in Full.

After a great deal of discussion and the injection of unnecessary or vicious clauses, most of which were finally struck out, the Massachusetts automobile measure has become a law. It is as good a one as can be expected at this time. The speed limits—ten and fifteen miles—are reasonable, and the provisions for passing fractious horses are not as onerous as it was at one time feared they would be. The measure is as follows:

Section 1. No automobile or other motor vehicle shall be run on any public highway outside the limits of a city, fire district or thickly settled or business part of a town at a speed exceeding fifteen miles an hour, and no such vehicle shall be run on any public way within the limits of a city, fire district, or of any thickly settled or business part of a town at a speed exceeding ten miles an hour.

Sec. 2. Every person having control of a motor vehicle or automobile shall, whenever upon any public street or way and approaching any vehicle drawn by a horse, or any horse upon which any person is riding, operate, manage and control such motor vehicle or automobile in such manner as to exercise every reasonable precaution to prevent the frightening of any such horse or horses, and to insure the safety and protection of any person riding or driving the same. And if such horse or horses appear frightened, the person in control of such motor vehicle shall reduce its speed, and if requested by signal or otherwise by the driver of such horse or horses, shall not proceed further toward such animal unless such movement be necessary to avoid accident or injury, or until such animal appears to be under the control of its rider or driver.

Sec. 3. Upon approaching a crossing of intersecting ways, and also in traversing the crossing or intersection, the person in control of a motor vehicle shall run it at a rate of speed less than that above specified, and not greater than is reasonable and proper, having regard to the traffic and the use of the intersecting ways.

Sec. 4. The term "motor vehicle" in this act shall include all vehicles propelled by any power other than muscular power, excepting railroad and railway cars and motor vehicles running only upon rails or tracks.

Sec. 5. Any person violating any provision of this act shall be punished for each offence by a fine not exceeding \$200, or by imprisonment for a term not exceeding ten days, or by both such fine and imprisonment.

Sec. 6. This act shall take effect upon its passage.

A Notable Recruit.

One of the latest recruits to the ranks of automobilists is Ernest Thompson-Seton, the author. He recently accepted an invitation from Winthrop E. Scarritt to take a ride over the famous Orange (N. J.) roads, and, taking to the pastime with his accustomed energy and enthusiasm, it was only a few minutes before he was learning how to run the vehicle. After the ride he remarked that the speeding reminded him of the Arab's fleet steed: "The horse appears on the horizon, and one has just enough time to murmur a short prayer when it dashes by and vanishes on the other borizon."



The Motor Work.

SPEEDING UNLIMITED

Can be Indulged in on Road Planned for Long Island Automobilists.

There is every probability that a broad, level speed road for the exclusive use of automobiles will be constructed on Long Island in the near future at a cost approximating \$500,000. It will certainly be twenty-five miles in length, and may extend for a distance of fifty miles.

For some time a road of this kind has been talked of. It appears that a project to build one has been on foot for some little time, and that a number of steps have been taken toward its accomplishment. A number of wealthy automobilists, most if not all of them members of the Automobile Club of America, are supporting it, and the work of acquiring the right of way, surveying the course, etc., is already under way.

It is stated that the fear that prices for the ground wanted for the road would undergo material advances is the reason for the secrecy that has been and is still being observed. Four men are reported to have undertaken to subscribe \$400,000 of the \$500,000 required. One of those most interested is Sidney Dillon Ripley, and another is President A. R. Shattuck. Both admit that the plan has really taken shape, but decline, for the above reasons, to go into details.

The course of the proposed road lies through that portion of Long Island which has found most favor as a place of residence for wealthy New Yorkers. The latter, or at least the automobilist portion, have long been restive under the present speed limitations, and the road would afford them a means of gratifying their desire for speed and permit them to travel between their homes and offices at a pace in excess of that made by even the fastest express trains of the Long Island Railroad.

It is said that the necessary land will be purchased, and the speeding course will be a private roadway, owned and controlled by a corporation. Certain rules and regulations will obtain in the use of it, but permission for races will be given when deemed proper by the owners. It is probable that the Automobile Club members will obtain the privilege of using it at any and all times through some arrangement on the part of the club to pay an annual fee. It is possible also that later automobilists at large will be permitted to use it by making a toll road of it, but these details have not yet been decided.

What is known concerning the plans is that the projectors intend to make it as nearly as possible a straightaway course without a single crossing at grade. How this is to be accomplished is at yet uncertain. It is not desirable to have the speedway go under the highways and railroads, nor over them, because of the grades that would entail. It is possible the highways and railroads will be bridged over the speed-

way, or such of them as interfere with its level grade. This, it is believed, money and influence can accomplish, because the residents, the drivers and the railroad company all would be glad to have the automobiles where they remove the danger of striking or being struck at grade crossings.

Going fifty miles out on Long Island, the road would reach past Babylon and to some point between that and Patchogue. This would enable many of the wealthy residents of this city who have summer homes out that way to reach them at any time of day or night more quickly than they could by train if they had powerful automobiles, as most of them have. Oakdale, where the Vanderbilt place is located, is 49½ miles from Prospect Park as the roads now go, but on a straightaway course it would hardly be any further than that from Long Island City. Although the movements of the capitalists interested are being kept as quiet as possible, probably because the land and the desired privileges have not vet been obtained, those who know what is being done express confidence that the road will be an accomplished fact before very long.

In addition to the delays incidental to the acquiring of the right of way and the building of the road, a further one will undoubtedly be caused by the necessity for obtaining permission for it. This will have to come from the State Legislature, and as it does not meet until next winter very little real work can be done before next spring.

Built a Barrier.

The highroad between Camden and Atlantic City is not to be made a racecourse by reckless automobilists, not if the good people of Absecon can help it. Absecon is a little village about half a dozen miles west of Atlantic City, and famous for an excellent brand of summer oysters. The newspaper stories of the weathy Philadelphians who plan to take their outings this summer by riding to the city by the sea in time only surpassed by the railway flyers, have stirred Absecon to its core. Consequently its citizens are building a battering ram as a weapon of offense.

The battering ram is in the nature of a heavy swinging structure, and red lights of warning will be flashed a mile up the road whenever an automobile scorcher is seen approaching.

The patrol at Hammonton will telephone the instant a machine passes there, and if it reaches the outskirts of this town ahead of time the driver will be first warned by red danger signals, and then if he does not heed the barrier will be lowered.

It is calculated that the barrier will either smash the machine or give its occupants a good stiff bump.

Returns of the exports of automobiles and parts for the month of March show that \$88,350 worth was sent abroad. For the nine months of the fiscal year the value was \$517,532.

FOUR GOOD ONES

All of Them Busy and Contented—How Cleveland Regards Them.

Cleveland, O., May 9.—The Motor World man missed his periodical trip through the Winton factory to-day, under the kindly guidance of Charles B. Shanks. That prince of pen-pushing publicity promoters, editor, correspondent, tourist and general all-around good fellow—in fact, Alexander Winton's right arm—was downtown valiantly battling for a liberal ordinance governing the speed of automobiles within the city limits. How well he and his fellows succeeded is told in another column.

However, every one knows how busy the big factory is in striving to supply the avalanche of orders for the hit of the New York show, the famous Winton touring car that made its initial bow at that time. What was sought, however, was news of the new Winton factory, which Mr. Brown kindly volunteered to supply, stating that brick was now being laid and work progressing in a very rapid manner. The new factory, though located some distance from town, is very accessible, two car lines running almost to the very doors. When the company are fairly settled it is safe to say that a few surprises will emanate from there occasionally-a habit the Winton company have, and one that keeps many watchful eyes in their

The whole town is proud of the splendid record of the White in the recent Long Island endurance run. On all sides words of praise are heard, and on every hand one sees a White going past. There must be an astonishingly large number in use here, and one is never seen in trouble. Popularity in its own town is a pretty good recommendation. There is considerable questioning as to how soon the company are going to be able to deliver the wonderful condensers that "do the trick." There is certain to be a scramble for them.

At the new Baker factory work is progressing with clocklike regularity, and though a large number of rigs are being turned out there is no let-up in the demand and the company are unable to catch up with orders. In consequence Sales Manager M. L. Goss's position is a "cinch," so far as selling goods is concerned, though in justice to him it may be said that he gets busy once in a while, having a few other matters to take up his time. As a matter of fact, he is the busiest man in seventeen counties.

Out in East Cleveland the F. B. Stearns Co. are hard at work on their new tonneau machine. It is a tribute to the worth of their regular touring car to say that the same identical motor is used in the new-comer and furnishes ample power and speed. The catch phrase, "Stearns cars are worth more than they cost," which Manager Mc-Crea has adopted, expresses tersely a truism



that appeals strongly to an intending purchaser.

"The Frank B. Stearns Co. are good people and build a good car," is about the way this company are spoken of locally.

M. J. Dobler, of the Munger Vehicle Tire Co., is making a trip among the Western trade, and Munger merit loses nothing in the telling by the energetic, white-crowned missionary. He has been successful with some of the most conservative and solid companies, and it looks as though this tire would enjoy a considerable degree of popularity as it is better understood and appreciated.

With Ample Backing.

Although launched in a modest way, and with a comparatively small capital, the Baker Mfg. Co., Middletown, Conn., which was recently incorporated, contemplates operating on an extensive scale, having ample capital back of it. The concern was formed by Herbert C. Baker, who invented the disk movement gasolene engine which bears his name.

The Baker gasolene motor has many points which commend it to those who have given it careful attention. It is a three cylinder motor, with its main shaft on a line with the axis of the cylinders, instead of the transverse arrangement where the ordinary crank movement is employed.

The most important feature of the motor from the engineer's point of view is the method of accurately regulating and measuring the amount of hydro-carbon that is admitted to the cylinders in a volatilized form, and thereby the attainment of a degree of certainty and constancy in the power developed by the motor which is not attainable in the hydro-carbon explosive motors as heretofore constructed. Another feature is the combination in one complete machine of all the apparatus usually treated as adjuncts, such as the provision of electric current for the ignition of the charges in the cylinders, the mufflers, etc.

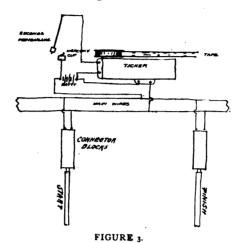
The automobile which Mr. Baker has designed and which is to be built at Middletown follows the general lines of the most powerful French machines, but is a marked improvement on them. The motor is carried in a hood at the front of the vehicle, and this hood is carried back and upward so as to form a shield for the persons sitting on the front seat of the vehicle. Seats are provided for four persons. By means of a new system of power transmission it is claimed the range of speeds in this automobile will surpass that of any machine of this class now made. By a simple forward and backward movement of a single lever it will be possible for the operator to attain any one of fifteen or twenty different rates of speed, with a minimum of five miles an hour and a maximum of from forty-five to fiftyfive miles.

There is some talk of holding an impromptu race meet at Narragansett Park, Providence, R. I., on the afternoon of May 30.

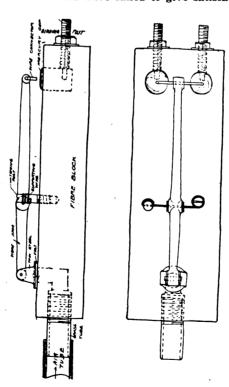
ANOTHER TIMING DEVICE

Records the Seconds Like a "Ticker" and is Simple and Inexpensive.

Devices for timing short distance races on straightaway courses are usually efficient only in proportion to their elaborateness and cost. The one which the Automobile Club of America has brought from France to use at



its forthcoming trials on Staten Island is said to have cost \$1,000, or will have by the time the trials are over. The very primitive arrangement used at the Long Island trials last fall would have failed to give satisfac-



tion even had it been in charge of competent operators; with the additional handicap of incompetent ones, it is little wonder that a flasco was narrowly averted.

FIGURE 2.

The apparatus used to correct the time of clocks in a large number of cities, the official time of the Washington observatory be-

ing taken as the standard, possesses many advantages. Not the least of them is simplicity. The work is done day in and day out, year after year, like clockwork, to use a most apt expression.

A device which combines many of the good features of the Washington apparatus, together with some of those of the "tickers" in use nearly everywhere, has been used, and with complete success. It is the invention of H. W. Alden, M. E., superintendent of the Electric Vehicle Co., Hartford, Conn. It possesses the very decided merits of being inexpensive, leaving a positive printed record, as well as of being absolutely correct.

Mr. Alden describes it as a device that will "work every time." He goes on to say:

"The apparatus consists of an old fashioned stock ticker having a paper ribbon and two recording fingers. One records on the ribbon a little dot for every second and the other records by a similar dot at the other edge of the ribbon the instant that a vehicle passes a given point.

"The general arrangement is shown in Figure 3. The usual pneumatic tubes laid across the course are used. These run to circuit closing blocks shown in Figures 1 and 2, consisting of hard rubber and having an oscillating arm, from one end of which hangs a damper covering the opening of the air tube, and to the other end of which is attached a bent wire dipping into two neighboring mercury cups and completing the circuit.

"The action is practically instantaneous and is better than a stop watch in that there is practically no friction to overcome. Also, there is an actual printed record obtained, which can be witnessed and signed as proof positive of what was done.

"I have found this apparatus in a slightly different form eminently satisfactory for recording accurately to the hundredth of a second, and I offer the suggestion at this time for what it may be worth."

Organized in Indianapolis.

After having been under contemplation for some little time, the plan of organizing an automobile club at Indianapolis, Ind., was successfully carried out last week.

The details of the organization were not completed, being left to a later meeting. Fred M. Ayres was chosen president, Silas Baldwin vice-president and A. J. McKim secretary-treasurer. An executive committee, including the officers named and in addition Dr. E. F. Hodges, Dr. Henry Jameson, Henry Severin, jr., and George W. Pangborn, was named to organize a larger membership. The club selected the name "The Automobile Club of Indiana."

For a Standard Cuarantee.

The first draft of a standard form of guarantee has been prepared by the executive committee of the National Association of Automobile Manufacturers. It will be submitted to the members of the association for their consideration.



The Motor World.

CLAIMS BLUE RIBBON

England Says He Won It—Long Island Club Disqualified Him.

A cause celebre is what the dispute between I. W. England and the Long Island Automobile Club bids fair to become. The former claims that he is entitled to a blue ribbon for covering the course in the recent contest without a stop. The club's committee contests the claim, and asserts that England was fairly disqualified, owing to his having covered the course in too short a time.

As returned by the official timer, J. E. Savelle, vehicle No. 71, of which I. W. England was the owner and operator and C. E. Whitney the observer, covered the course in 6 hours 26 minutes and 20 seconds, or 13 minutes and 40 seconds less than the minimum time. On the other hand, Observer Whitney tells the Motor World representative that he made the time 6 hours and 33 minutes, or 7 minutes ahead of time, and as the committee permitted the contestants 10 minutes leeway No. 71 was safe by 3 minutes. This time, he adds, was taken on his own watch, a reliable timepiece, the starting time being 9:47 and the arriving time 4:20.

And there the matter stands. Chairman Pardington informed the Motor World man in no uncertain tone that the disqualification was justified by the circumstances. Equally positive are the other two men that justice is on their side, and that a blue ribbon was earned and should be awarded.

Observer Whitney says that the difficulty of keeping within the time limit was made much greater owing to his having had his map blown away early in the run. He was therefore unable to gauge the distances properly, although every effort was made to do so. He adds that England fully seconded his efforts, and that all temptations to go at anything like full speed were successfully resisted.

Made Good His Claim.

When contestants congregate around the start of any competitive event the desire to tell of a meritorious performance in a previous trying out is recognized as a very human trait. The preliminary performances are always "record breakers," and, of course, the auditors accept them with a grain of salt, if not with direct and open remarks of doubt and derision.

Naturally, at the gathering of the clans on the morning of the start of the Long Island Automobile Club's recent successful event there were many stories told of what had been done over the course in going it alone. They had to do with many things, but, as was natural, the recurrent story was that which told of small gasolene consumption. A Motor World representative was one of a group, which also included R. M. Owen, the New York Ollsmobile man, and when Mr.

Owen told of going over the course the previous day on a little more than three gallons of gasolene, he came in for much good natured chaff.

For at least once, however, preliminary testimony has been made good by after performance in actual contest. The official awards show that the gasolene consumption of the Oldsmobile was 31-6 gallons. The last laugh being the best, Mr. Owen scores heavily against those who pointed against him their shafts of wit.

Does the Work of Nine Horses.

Hans Peterson, a Minneapolis., Minn., printer, thinks he has hit upon just what is needed in an automobile plough. He is confident that by next season he can dispense with the nine horses it takes to furrow his section of North Dakota land.

"My reasoning isn't altogether theoretical," said Peterson. "I got the idea last year when I saw Richland County, N. D., and Roberts County, S. D., farmers hitch ploughs to steam threshing engines and plough up their fields."

Peterson will get his motive power from a twenty-five horsepower gasolene engine. It will rest on a light wooden frame, supported by two immense Sarven double wooden drive wheels and a single steerage wheel of the same pattern. The wheels are provided with light iron rims and a two foot tread. A three-breaking plough is to be hitched to this ponderous device. Peterson believes his invention will do the work easily because it weighs far less than a steam engine, and because, ordinarily, it only takes a three horse-power to plough land.

Recent Incorporations.

Kittery, Me.—Puritan Motor Car Co., with \$135,000 capital, to make and sell automobiles and other vehicles. The officers are Charles C. Smith, president; Joseph B. Dow, treasurer.

Trenton, N. J.—The Phipps Road Car Co., with \$1,000,000 capital, to manufacture machinery and vehicles of all kinds. Incorporators: E. H. Phipps, H. F. Parker and Frank A. Reynolds, all of Jersey City.

Elizabeth, N. J.—The Curtis Machine Co., with \$5,000 capital, to make gasolene, electric and other motors for automobiles and wagons, and to carry on a general repair business. The stockholders are George L. Tryon, Ira H. Curtis and Walter E. Hedley.

New York, N. Y.—Metropolitan Repair and Supply Co., with \$6,000 capital. Directors: F. M. Lande, C. S. Towle and S. W. Jacobs. New York, N. Y.—General Motor Car Co., with \$10,000 capital. Directors: G. W. Betts,

with \$10,000 capital. Directors: G. W jr., G. N. Slauton and W. H. Peck.

The Week's Exports.

British Possessions in Africa—5 cases motor vehicles, \$4,431.

Hamburg—6 cases motor vehicles, \$4,460. Liverpool—2 cases motor vehicles, \$1,550. London—32 cases auto vehicles and parts,

Philippines 4 cases motor vehicles, \$2,100.

RECORDER SAYS NO!

Magistrates Cannot try Automobilists and Send Them to Prison.

A sudden and very unexpected halt was called on the crusade against automobilists in this city on Monday. As a result it is very probable that the persecution of motor vehicle users will not go on at such a lively rate as it has of late.

The check was caused by the action of Recorder Goff, who, in the Court of General Sessions, handed down a lengthy decision, in which he says in effect that he does not think the city magistrates have power to impose fines on automobilists and chauffeurs for violating the law with regard to speed. He says that the offence mentioned is a misdemeanor, and as such comes under the jurisdiction of the Court of Special Sessions.

The decision was written in the case of August Paterson, who was arrested on March 30 on Eighth avenue, between One Hundred and Fifteenth and One Hundred and Sixteenth streets. He was charged with having run his motor vehicle at a speed of twelve miles an hour, and, having been taken to the Harlem Police Court, was fined \$50 by Magistrate Mott.

Appeal was had from Magistrate Mott's decision to the court of Recorder Goff, with the result above stated. Recorder Goff says in conclusion:

"With reluctance do I reach the conclusion that the magistrate has no jurisdiction to hear and determine this charge of misdemeanor, for the safety of the public, imperilled by the reckless driving of motor vehicles through the crowded thoroughfares of this city, would, in my opinion, be best protected by prompt and salutary exercise of summary power vested in the magistrates."

Fanned by the Wheels.

Decidedly novel, at least, is a recently invented speed measuring device for automobiles. It is inclosed in a metal case with glass front, the whole being as dust and air proof as possible. In the inner case are two fans, the larger one receiving its impulse from the vehicle tire and the smaller deflected by the air currents set up by the larger fan. The shaft on which the small fan is mounted carries a pointer, and is encircled by a hairspring providing the counter force. When the speed of the vehicle is to be measured, the roller at the end of the shaft is brought into direct contact with the tire of one of the road wheels.

Fred A. Law, of Hartford, Conn., is building a gasolene vehicle which he expects to have completed in a very short time. If it is successful its manufacture will be undertaken, capital for the purpose having been secured.



The Motor World.

TRINITROPHENOL'S ACTION

How This Chemical, Which is Merely Picric Acid, Resembles Nitro-Glycerine.

The problem of using high explosives as a source of energy has always been a fascinating one, but the difficulties and dangers besetting the path of the investigator in this line have hitherto rendered progress almost imperceptible, says a writer who has studied the subject closely.

The question, however, has acquired an additional interest in view of the reported use of picric acid, one of the best known of modern explosives, by one of the competitors in the recent French consumption trials, and though no very definite information regard-

even with a few fragments of lime, it becomes capable of violent explosion.

This sensitiveness to the action of oxides may obviously prove a source of risk to its use in motors. It does not leave any residue on complete combustion, but this is not attained without the addition of an oxidizing agent, which, as increasing its explosive force, would probably be quite inadmissible for motor purposes, and the question as to what residue, and whether a dangerous one, might accumulate under such conditions of use requires investigation. It is soluble in 100 parts of cold water, and also in either alcohol or petroleum, though to what extent in petrol does not appear, while its temperature of explosion is said to be 2,620 degrees C., and its heat of combustion 618 calories.

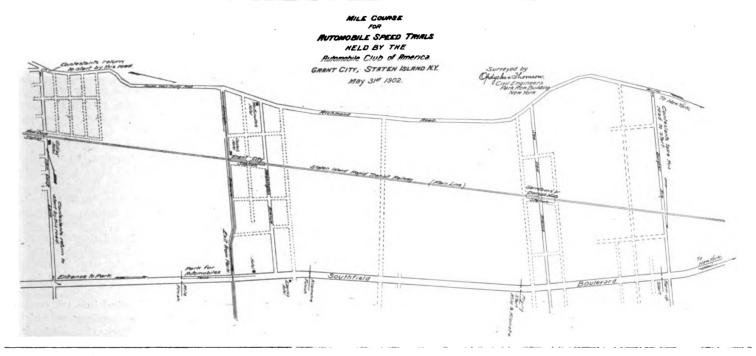
The advantage which may accrue with modern high-speed motors by the admixture

SUITS THEM NOW

Does The Automobile Ordinance Passed by the Cleveland City Fathers.

As a result of a determined stand made by a delegation headed by Secretary Reese, of the local club, against a proposed Cleveland, O., ordinance relating to automobiles, the measure has been so amended that it is entirely satisfactory to the motor vehicle users of that city.

The chief complaint against the ordinance lay in its provision for illuminated signs bearing the number of the vehicle for purposes of identification at night. It was finally decided to have the number placed on the side of the vehicle in aluminum, each num-



ing the experiments in this direction are available as yet, some remarks on the substance in question may claim a certain amount of general interest, as well as laying a desirable emphasis on the risk attaching to incautious experiment in such a tempting field.

Picric acid, or trinitrophenol, is a substance obtained by the action of nitric acid on carbolic acid, and thus bears a certain analogy to nitro-glycerine, though its explosive properties remained long unrecognized. If gently heated it may be melted (at 120 degrees C.), and even vaporized, the vapor burning without explosion. If, however, it is heated suddenly, as by throwing on a redhot plate in small quantities, it explodes, while its salts, as potassium and ammonium picrate, are even more explosive, the latter, mixed with potassium nitrate, forming Brugere's powder. The pure acid, though not easily exploded alone, does so violently if ignited by a detonator, and a special point to notice is that with some metallic oxides, and of substances with the normal fuel which increase the rapidity as well as the force of combustion is obvious, but an ample course of experiment with stationary motors, with particular reference to indicator readings, to discover whether danger may be apprehended from irregular, oscillating and excessive explosions (as has been the case with acetylene motors), is desirable before taking them as companions of the road.

Scene of the Trials.

The stretch of road on which the mile record contest of the Automobile Club of America will take place on May 31 has been selected and surveyed. The accompanying map shows the course, which is situated on the Southfield Boulevard, Staten Island. Including the "warming up" and the slowing down portions, the distance is about two miles.

The German Daimler Co. is said to be making some experiments with steam cars.

ber to be provided by the city clerk, together with a license, for \$1.

There was much discussion in regard to the speed regulations. The ordinance was finally made to read that the speed could be as high as 15 miles an hour, except within a radius of three-quarters of a mile from each end of the Superior Street Viaduct, where it must be reduced to 7 miles per hour.

In the matter of penalties, the ordinance was also materially changed. It had provided that the fine should be not more than \$50 nor less than \$25 for each offense, and that on the second offense the driver's number should be taken away from him, his license revoked and himself debarred from operating any automobile in Cleveland in the future. At the urgent representations of the automobile delegation, the minimum fine was stricken out and also the provision for the revoking of licenses.

An automobile club is talked of among Bridgeton (N. J.) motor vehicle users.



TRIUMPH OF THE TIRES

They Went Through the Recent Endurance Test in Remarkable Fashion.

The behavior of the tires on the Long Island endurance run was a feature of the event that did not receive its due. Many items contributed to make the event notable, but none was more marked than the fine showing of the tires. It was a significant fact, too, that extra tires—so much in evidence in the New York-Buffalo run—were not carried. Consequently the vehicles had to come home shod as they were at the start or not come at all.

The casualties were few in number, the minor mishaps scarcely greater. One or two vehicles came in with a single tire missing, about an equal number reported puncture repairs and soft tires, and several others had nails sticking in the tires. But even the total is very small. Until the official figures are obtained it cannot be seen just how much trouble was due to tires. But it is certain to be remarkably and unexpectedly slight, and it is doubtful whether there was a single case where the shortcomings of the tires wrecked the chances of the vehicle.

The action of the club in changing its original plan of making no allowance for tire mishaps has been proved a wise one by the event. A few vehicles would have lost ground or even been thrown out had the rule not been changed; as it is, they have scored, and yet the total of tire troubles has not been great enough to make any material difference.

From the rather meagre list of happenings of this sort obtainable two or three are worth notice. A Locomobile picked up a nail about forty miles from home, but covered the entire distance without repair, and with a soft but not entirely deflated tire. Dunlop tire on one of the Fournier-Searchmonts was punctured; the cover was taken off, the tube repaired and replaced, and the car was on its way again in twenty-nine minutes. In marked contrast was a Michelin tire on a foreign vehicle at the start. It took two hours to re-. place the inner tube in it. A Ward-Leonard came in on three tires. Except the set on the truck, which were solid, all the tires were pneumatic. Of these the single tubes were in a majority, although the detachable type ran them a good second. Nearly all of the French vehicles were equipped with tires of a similar origin.

Activity in Parts Making.

Among the parts factories a scene of the greatest activity everywhere prevails. As noted elsewhere, the American Ball Bearing Co. are doubling their capacity and contemplate putting up a big brick factory in the fall. This concern has been doing a phenomenal business with their famous Baker ball bearings, steering knuckles, etc., num-

bering among their customers many of the leading manufacturers in this country.

It really seems to be only a question of time when they will nearly all be gathered into the fold, for whatever prejudice ever existed against ball bearings has been dissipated by Manager Philip Dorn wherever he has had an opportunity to demonstrate by the cold logic of actual performance the superiority of his splendid construction.

Even Henri Fournier, Frenchman that he is, and with all his countrymen's predilection for the plain bearing, succumbed at the Chicago show and spoke in the highest terms of the American Ball Bearing Co.'s product.

The Standard Welding Co.'s rim business has been very satisfactory, though naturally it is not running so heavily now, most makers having a supply in stock. The company are branching out into other lines, among them some specialties that will be offered the medical supplies and drug houses.

The Kelly Handle Bar Co. generators continue to enjoy favor, and are sold wherever steam carriages are known.

Taken all in all, Cleveland is a very busy automobile centre and growing more so every day.

Balls For Every Purpose.

Three tasty booklets have been issued by the Cleveland ball and pedal factory of the Automobile and Cycle Parts Co., Cleveland, O. The various titles are "High Duty Tool Steel Balls," "Tool Steel and Bessemer Balls," and "Brass and Bell Metal Balls." The letter press in each is distinctly good and direct to the subjects treated of.

To tell of all the uses that balls are put to would mean the making of a list of every mechanical thing that has motion, from the light umbrella to the heavy gun carriages used in naval warfare. Each booklet treats of the balls in its classification, and is brightened by illustrations of a few examples. They also tell of balls made in other metals than those given in the titles.

Many pithy points could be quoted. To those who use balls the following will appeal with considerable force: "Something more than a micrometer is needed to distinguish between good balls and bad ones. The test for sphericity can only determine accuracy of manufacture. The test for quality must be service. We make balls which meet the severest requirements of both tests."

Sweeps Without Sprinkling.

It is expected that the second and perfected Collins automobile street sweeper will be at work on the Hartford (Conn.) streets next week. The experiments with the first sweeper attracted wide attention, and its makers are receiving a large number of inquiries from all parts of the United States. The company has already received convincing evidence that there will be a large sale of these elaborate and novel machines, which are capable of thoroughly cleaning a dry pavement without the help of a watering cart in advance of it, and without raising an appreciable amount of dust.

YOUNG TAKES WATER

And Admits Rights of Automobiles in Parks— What He Really Meant.

Although he has receded somewhat from his first position, Park Commissioner Young still takes a rather high handed attitude in regard to his practical prohibition of the use of the East Drive in Prospect Park, Brooklyn, to automobilists.

He now states that his order was merely in line with the effort previously made to confine automobile traffic to the West Drive. This effort has the support of the Long Island Automobile Club and of right minded automobilists generally. The West Drive is in every way more suitable for their use than the East Drive, the latter having numerous turns and steep grades. By confining the West Drive to automobiles the East Drive is left for fractious or scary horses which have not yet had time to bear the sight of automobiles without making trouble.

This is the way the matter worked out in practice, and nearly everybody concerned was satisfied. But a few weeks ago the Commissioner went a great deal further, and thereby stirred up a hornet's nest. He issued an order forbidding the East Drive to automobiles, and had signs posted directing automobilists to use the West Drive.

This proceeding was aggravated by the action of the park police. Commissioner Young sent a copy of the order to the Park Police Department, and Captain McNamara immediately placed an officer at the point where the road starts, with instructions to stop all machines that attempted to travel over the East Drive. Then the Long Island Automobile Club looked into the matter.

The club held a meeting, at which the mandate of the Park Commissioner was criticised. As a matter of fact, the Long Island Automobile Club had placed a sign at the disputed point a year ago, requesting chauffeurs to avoid the East Drive. After this action the club particularly resented the order of the Park Commissioner.

President Grant of the club sought out the Commissioner last week, and stated that he could not legally issue an order of that kind because a State law had placed automobiles on the same footing as other vehicles. The Commissioner appears to have taken the same view, for Mr. Grant is quoted as saying:

"I had a friendly talk with Park Commissioner Young. I asked the Park Commissioner whether he had issued an order of the kind credited to him, and he said he had. He added, however, that it was not arbitrary and not meant as a mandate at all. I asked him what the policeman was stationed there for, and he said it was simply to ask chauffeurs and advise them to stick to the other road. He said he never intended to make arrests if a man tried to go through the East

Drive. Why, you know, one of our members went through there recently and he warned the officer stationed there that he was going through, whether he (the officer) liked it or not. The policeman did not stop him, either, so you see if we wish to go through there we will. Unless we have to, we will stick to the other road, however."

Lessons of the Brake Test.

Chairman S. S. Wheeler of the technical committee of the Automobile Club of America has embodied in his report of the brake tests, held on Riverside Drive on May 1, a summing up of the results achieved, together with a table of averages.

"Seventeen different types of automobiles, running at about eight miles an hour, stopped upon signal in an average distance of 9 feet," he says. "A victoria, drawn by two horses going at a nine mile gait, required 17 feet 8 inches, and a four in hand coach, going at the same speed, required 26 feet for stopping, while a bicycle policeman, going at 9.4 miles, stopped in 8 feet.

"At the fifteen mile speed the automobiles stopped on signal in an average distance of 29 feet, the victoria in 37 feet and the four in hand in 77½ feet. At the twenty mile speed the automobile stopped in an average distance of 53 feet, the bicycle policeman in 61 feet and the four in hand coach in 91 feet. The tests showed clearly that automobiles can be stopped in a materially shorter distance than can other vehicles.

"The principal results of the tests were the strong impression produced upon all that the speed of eight miles an hour is very slow indeed; in fact, more so than most speciators realized; that automobiles can be manœuvered with great ease and convenience, and that the club's arrangements for wents of this kind are arranged so that they move with precision."

Steamobiles in England.

American steam vehicles are steadily gaining ground in England, the Englishman's predilection for steam being well known. The "Steamobile" Co. of America, Keene, N. H., last week made a second shipment of "Steamobiles" to that country, and received an order for another lot by cable. F. Wilkinson & Co., 25 Cornbrook Road, Manchester, have been given the English agency for these vehicles.

To Nyack and Back.

Eleven vehicles took part in the run of the Automobile Club of America to Nyack, N. Y., last Saturday. The start was made from the clubhouse at 10 a. m., and the river was crossed by way of the Fort Lee ferry, instead of Forty-second street, as had been intended. On the return the automobilists crossed to Tarrytown, and followed the well known route through Yonkers, etc.

The Darracq has been added to the list of automobiles sold by the John Wanamaker establishment.

LEHWESS STARTS

On His Journey Around the World—His Vehicle

a Hotel on Wheels.

From the days when the first Carthaginian circumnavigator started on his long and perilous journey around Africa—that continent being his world—similar undertakings have always possessed a fascination for the hardy adventurer.

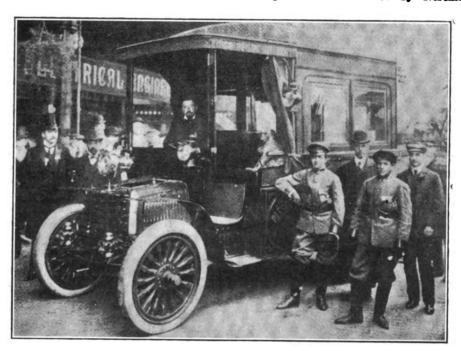
The latest globe girdlers—Dr. Lehwess and his companions, wno fix upon the automobile as the most fitting vehicle for the purpose of twentieth century exploration—face peril no less than their predecessors, notwithstanding the care with which the trip has been planned, and the precautions that

of a Pullman sleeper, and is, in fact, a travelling hotel.

The expedition is provided with a complete photographic outfit, and arrangements are being made to supply a descriptive illustrated record of the tour and its incidents. Dr. Lehwess had been commissioned at different times by the German Government to hold special inquiries into various industrial matters.

The start was made from London, whence a run was made to Dover, where a crossing to France was made.

From Paris the route proposed is as follows: Brussels, Cologne. Berlin, Posen, Warsaw, Vilna, St. Petersburg, Moscow, Nijni Novgorod, Kasan, Chiliabinsk, Omsk, Tomsk, Krasnojarsk, Irkutsk, Kianchta, and then either across the Desert of Gobi to Peking and Tien-Tsin or by Nerchinsk,



are being taken to insure the continuance of their journey. The wide steppes of Asia have proved the last resting place of many brave men, and while every year removes some of the difficulties of such undertakings they still remain real and formidable.

The vehicle in which the trip, which started last week, is being made has been built especially for the purpose. It bears the appropriate name of Passe Partout, and has been specially built to Dr. Lehwess's specification, at a cost of £3,000, by the two great French firms of Panhard-Levassor and the Carosserie Industrielle. When fully loaded it weighs nearly three tons.

The motor, which is of the Centaur type, develops up to 30 horsepower, and has been tested successfully on a gradient of 1 in 5.

The most ample preparations for relays of petrol, accessories and spare parts (particulary tires) have been made along the line of route, but so great is the working endurance of the car that it will be possible for it to run considerably over 1,000 miles without recharging. The car is fitted up in the style

Blagovirchensk and Ghabarov to Vladivostock, according to the political situation in China. From the Pacific Coast the expedition will cross by steamer to Japan, and from there via Honolulu to San Francisco.

From San Francisco Dr. Lehwess will proceed across Mexico to New Orleans, and from there to St. Louis, Chicago, Buffalo, Niagara Falls, and after an excursion into Canada will finish his transcontinental journey at New York. From New York the car will be shipped to Liverpool, whence the final stage to London will be entered upon.

Designed By the Chief.

Chief Croker, of the New York Fire Department, has received a new Locomobile, and tested it with satisfactory results. The chief has made several tests of the machine, and has expressed himself as much pleased with its workings. It is a special vehicle, of strong and heavy construction, with an extra wide seat, which will hold three persons. On the trial trip a speed of thirty miles an hour was attained.

The Motor World.



Henry Trebert, superintendent of Stearns Steam Carriage Co., has resigned.

The St. Nicholas Skating Rink, this city, is to be turned into an automobile station.

The Geneva Automobile and Mfg. Co., Geneva, O., have issued a new catalogue.

It is expected that there will be one thousand automobiles sold in London this season.

A. L. Dyke, the St. Louis manufacturer, has removed to larger quarters at 1402 Pine street, that city.

Padelford & Bell, 250 West Eightieth street, New York, have opened a storage station and salesroom.

The Brooklyn Automobile Co., Bedford avenue, Brooklyn, has acquired the agency for the Haynes-Apperson vehicle.

Albert Loppacker, of Bloomfield, N. J., has built an automobile for his own use. Novelties in transmission devices are hinted at.

A syndicate, said to have in mind the erection of an automobile factory, has been looking at a site in Oakdale, near Toledo, Ohio.

Instructions have been issued to the Chief of Police of Albany, N. Y., to see that the new State law, the Cocks bill, is strictly en-

The "Lixer" and the "Vapomobile" are two additions to motor vehicle nomenclature. The cars bearing these names are of British manufacture.

The Pennsylvania Steam Vehicle Co. is out of business, its effects having been purchased by W. J. Haether, 512 Drexel Building, Philadelphia.

W. W. Taxis, once famous as a bicycle rider, is at the Toledo factory of the International Motor Car Co., preparatory to starting out on the road for them.

Business in Chicago is remarkably good. This is particularly true of gasolene vehicles, nearly every dealer being sold far ahead, in many cases deliveries not being promised before July 1.

The German Minister of the Interior has approved the proposal of the Nuremburg district authorities to use a motor prison van to carry prisoners to and from the prison and railway station at Nuremburg.

A heavy vehicle competition is being planned by the German Automobile Club, to take place on July 23 and 24. The trial is not one of speed, but of reliability and econ-

omy. The route to be covered is from Leipzig to Eisenach, a distance of 171 kiloms.

E. Voigt sailed for Europe on Saturday after a stay of several months in this country. He expects to return in July, by which time the first of the American built Charron, Giradot & Voigt cars will be on the market, it is said.

Progress appears to be making with the Wydt catalytique sparking plug, which has been receiving considerable mention of late. It is said that "all the difficulties hitherto connected with this invention have been removed."

Some real bargains in shop worn, demonstration and second-hand electric and gasolene automobiles are being offered by the Electric Vehicle Co. A price list descriptive of these vehicles has been issued, and can be obtained on application.

The following officers of the Locomobile Co. of the Pacific have been elected by the board of directors: Charles C. Moore, president; S. T. Davis, jr., vice-president; E. P. Brinegar, vice-president; L. N. Breed, treasurer; J. F. Havemeyer, secretary; J. A. Avis, assistant treasurer.

F. J. Newman, for the past two years with the Westinghouse Electric and Mfg. Co., has severed his connection with that concern and opened an office for himself as an automobile consulting engineer at 504 Lewis Building, Pittsburg. He was formerly with the Woods Motor Vehicle Co., Chicago.

The Automobile Club of France is holding a Salon, and it is worthy of note that President Loubet promised to attend on varnishing day. Of course, the paintings are devoted to the sport of automobiling. Among the exhibitors and adepts are MM. Carolus Duran, Friant and Zwiller, also several sculptors.

An election of officers of the Buffalo Automobile Club was held last week, and resulted as follows: President, Dr. Lee H. Smith; vice-president, George S. Metcalfe; treasurer, J. B. Scovell; secretary, Dr. V. Mott Pierce. These officers, with B. L. Jones and E. F. Hall, will form a board of governors. A country clubhouse is talked of.

Now that the partial blockade of the Eighth avenue entrance to Central Park, due to the subway excavations at that point, no longer exists, the Automobile Club of America has adopted a resolution asking its members to again make use of it. By so doing the Seventh avenue entrance, which is very narrow, will be less congested.

In the effort to accustom horses to motor vehicles it is said that many a nervous horse has been converted by being persuaded to take a lump of sugar from the automobile, and while in the first instance it exhibited fear at the mere presence of the car, it would end by munching carrots or removing a lump of sugar from the bonnet, even with the engine running.

The American Ball Bearing Co., Cleveland, O., are erecting a large addition to their plant, which, when completed, will double their present capacity. The ball bearings and steering knuckles made by the concern are being extensively used by the trade, their excellence in the matters of design and construction causing them to give most satisfactory results.

Of only slightly less importance than the purchasing of an automobile is the problem of where to keep it. In the suburbs and country this is particularly insistent, and many users with plenty of room are puzzled to know how to go about providing shelter. Portable houses fill the bill admirably, and a firm making a specialty of these is Mershon & Morley, of Saginaw, Mich. They carry four sizes in stock, and are able to ship promptly on receipt of order.

A device intended to prevent the running back of motor vehicles on steep hills was recently tried in England with success. It consisted of a couple of large wooden wedges supported one behind each of the rear road wheels. In climbing hills these can be let down on the road behind the wheels. While it cannot be said that they add to the appearance of the car, the wedges appear to be capable of preventing all chance of the car running back in a hilly country.

Restrainer Granted.

An order has been granted by Judge Hazel of the United States Circuit Court, Western District of New York, against the Buffalo Electric Carriage Co., restraining them from the use of the Porter battery, which infringes the Brush patent owned by the Electric Storage Battery Co.

Useful and Ornamental.

In a fashionable millinery shop the newest automobile hat exhibited is a "Petit Caporal" of white felt cloth. This Napoleonic bonnet has a band of white satin ribbon, which is fastened under the chin, and also long streamer strings of white chiffon, which can be wound around the neck with artistic effect. From each of the two points of the hat over the ears comes a slender nickel chain, which fastens the isinglass face shield to it.

"Give a Dog a Bad Name."

Link the name of any Vanderbilt to any motor vehicle, and the latter at once sprouts horns and goes cavorting over the roads, spreading death and desolation throughout the countryside. Vide the Middletown (Conn.) Tribune, which says:

"Young Vanderbilt, of Yale, accompanied by a party of friends, rode through here yesterday in his famous automobile, 'The Red Devil.' They were going so fast that the police forced them to stop and go slower. Teams were frightened, and Dr. McDougall's horse, which was coming down the Cromwell road, undertook to scale a stone wall."



SOLID PETROLEUM

For Fuel it is Formed Into Briquettes by a French Concern—Little Residue.

Petroleum for fuel in a solid form—that has an attractive sound to automobilists. The problem of its production has been solved by a French concern, which is about ready to place its goods on the market.

Consul Brunot, St. Etienne, gives an interesting account of the matter, although there are some points on which he does not shed sufficient light. The product is put up in what are called briquettes, and it is claimed that these weigh only half as much as coal—presumably this calculation is based on the number of calories possessed by coal and petroleum, respectively.

"The briquettes are mostly composed of petroleum, crude or refined, and possess all the advantages of coal and petroleum without the inconvenience of either," he says. "They weigh one-half as much as coal, leave only 2 or 3 per cent of residue, do not form clinkers, do not meit or run; burn without smell or smoke; do not absorb moisture; will float on the water (density 0,850); do not explode, and are not liable to spontaneous combustion under any circumstances; will keep indefinitely, retaining all their qualities of combusion; give off a very white flame eight to ten inches high; produce twice as much heat as coal, can be used in any kind of furnace and are easy and agreeable to handle.

"The manufacture of these briquettes is very simple. They are made without heat and no danger attends the operation.

"The petroleum is placed in one tank and the chemicals in another, and both are allowed to run into a mixing apparatus, when the chemical combination is formed immediately. The product is then passed to a press, where the desired form is given; the briquette is now ready for use or it can be stored. The pressure used in molding the forms is about 300 pounds to the square inch. As will be seen, the mode of procedure is very simple and the necessary plant very inexpensive, requiring only tanks, mixer and press, with small motor power for the latter two. Works erected at a cost of, say \$20,-000, would turn out several hundred tons a dav.

"The petroleum briquette is especially suitable for torpedo boats and as an emergency fuel on larger vessels; for its density, as compared with coal, will allow a steamer to accomplish twice as great a distance as with the same volume of coal. If a boat, for instance, takes 2,000 tons of coal to steam a certain number of miles, it would require only 1,000 tons of petroleum briquettes to cover the same distance; consequently that vessel would be able to carry 1,000 tone more fuel or an equivalent amount of cargo.

"A boat using petroleum briquettes could get up steam in one-fourth or one-third of the time required by coal. Further, a boat steaming with petroleum briquettes would show no smoke; which is important to naval vessels under many circumstances.

"Petroleum briquettes can be used for any kind of domestic or industrial work without changing the furnaces; for fire engines, where the rapid raising of steam is of great importance, these briquettes would seem to be the ideal fuel.

"As to the cost of manufacture, it appears that the oil is the greatest item, that of the other ingredieus, labor and machinery, being comparatively little.

"As to the price, it is estimated that they could be sold for eight francs per 100 kilograms (\$1.54 for 220 pounds)—in other words, \$14 per short ton."

Just a Mild One.

A great deal depends on where you hit as well as where you aim. To read the following extract you would scarcely think that it was an anti-speeding fulmination, yet that is exactly what it is, although a mild one. Says the Times:

In judging the accuracy, as distinguished from the veracity of the automobilists who, when arrested for exceeding the legal speed limit, vehemently deny that they were moving faster than the permitted eight miles an hour, it is well to remember that eight miles an hour is a speed so moderate that a vehicle which is not exceeding it is not at all likely to attract the attention of a policeman who brings the ordinary amount of common sense to the performance of his duties.

Men can walk faster than that. Not many of them do, indeed, but the mile walking record is 6 minutes 23 seconds, and that is at the rate of 9.4 miles an hour, and the walking record for 8 miles is appreciably less than an hour—58 minutes and 37 seconds, to be exact. Now, an automobile that is going less rapidly than men can and do walk when they are walking their best would not create any alarming amount of excitement in a New York street, where cabs and private carriages, to say nothing of electric cars, are constantly exceeding that speed, and not infrequently attaining those of ten or twelve miles per hour.

The purpose becomes plain, however, when the article goes on:

It is highly probable, therefore, that when a policeman even suspects an automobilist of violating the law the misdemeanor really has been committed.

The automobilist may be honest enough in his denial, for his motion being effortless and smooth, its rate naturally does not impress him so much as it does the observer whose means of locomotion are his feet or a bicycle. Differences of opinion are very easy in those circumstances, but it seems to us that, other things being equal, the testimony of the policeman or other complainant has the greater weight. Perhaps it will be necessary, if these disputes continue, to force the equipment of every automobile with a device that will not only show its occupant exactly how fast he is moving, but will also make an immutable record of his speed. If such attachments do not already exist they can easily be constructed.

TO SOFTEN WATER

Simply add Lime Water or, if Preferred, a Lump of Sal-Soda Will Do.

Users of steam vehicles residing in districts where the water available is very hard will be interested in the following process of softening it so it can be used without injuriously affecting boilers:

"Most of the hard water is that known as temporarily hard—that is, water containing a large amount of calcium carbonate held in solution by carbon dioxide. Probably as good a method as any for getting rid of the calcium carbonate is that known as Clarke's process. This consists in simply adding lime water, which precipitates the calcium carbonate, according to the following equation:

CO2 + Ca(OH2) — CaCO3 + H2O the bottom, and the soft water can be drawn off. Of course, heating water will soften it, although this is more trouble. When desired, rain water can be used.

"Another method that is sometimes used to prevent any formation of scale is to put a lump of sal-soda about the size of a pigeon's egg to about every twenty-five gallons of water. This has the effect of tending to cut out any scale that might form. It is always desirable that boilers should be frequently blown off, and there is probably no method as good as this for keeping a boiler clean. If the boiler is frequently blown off there will never be any trouble from scale. The boiler in an automobile is in a unique position, the water being kept in such violent agitation that deposit has little chance to settle.

"A common illustration that might be used is that of a glassful of muddy water. If it is allowed to stand for half an hour all the mud will settle at the bottom of the glass, and the water can be poured off, leaving a thick layer of mud, but by shaking the glass so that the mud will not settle, when the water is poured off the mud will go with it, leaving a clean glass. It is usually objectionable to blow off a boiler from a very high pressure, but, due to the construction of the boiler, it can be blown off from 200 pounds or more without any injury, and should be blown off after every run.

"Again, due to the large number of vertical copped tubes, there is not much surface left on the bottom plate for scale to form upon, and the results show that whatever deposit may have collected is carried out when the boiler is blown off."

Air and Water Pumps.

THE UNION STEAM PUMP CO., BATTLE CREEK, MICH., has brought out a
COMBINED AIR AND WATER PUMP;
also a SINGLE AIR PUMP and a SINGLE
WATER PUMP FOR STEAM VEHICLES.
They are thought favorably of by those who
have used them. They are a sturdy, well
made machine.



The Motor World.

WOODEN OR WIRE SPOKES?

The Disputant Delivers Himself of Opinions on the Entire Subject.

"It is rank heresy, I know," said the man who is fond of taking the opposite side, "but it seems to me that the movement toward wooden wheels is being carried entirely too far

"The other day I took part in a run on which there were a considerable number of automobiles equipped with these wheels. The vehicle I was in happened to have wire wheels, and perhaps it was that fact that made me, for the time being, a partisan. At any rate, I happened to look closely at the vehicle ahead, and noticed that one of the rear wheels was very much 'out of true.' At first I thought it was the tire, but a more careful examination made it plain that it was the wheel itself.

"Beyond a feeling of amusement at the fact that it was the wooden wheel that was in bad shape instead of a wire one—a glance at our wheels assured me that they were all right—the matter left no impression on my mind. But a little later I found myself behind another vehicle, also with wooden wheels, and, wonderful to behold, both of the rear wheels on it were preceptibly sprung.

"The coincidence roused me to the point of curiosity. Thereafter during the day I made it a point to sight the wheels—whether wooden or wire—near me whenever the opportunity offered, and I was very much astonished at the result. Many, probably a majority, of the rear wheels were sprung in greater or less degree. In one or two cases even the front wheels were not free from this reproach. But it was the easiest possible matter to pick at least one wheel on most of the vehicles that was not just as it should have been.

"Then I turned my attention to the wired wheeled vehicles. Of course, the greater part of them were of the light class, just as the wooden wheels were found on heavy vehicles in the majority of cases. But there were exceptions, the rule being departed from both ways.

"Strange to say, however, the wire wheels were in much better shape than the wooden ones. Many of them were perfect as far as the eye could tell, while others were so little out that it was only just perceptible. Not a single bad wheel was found. Of indifferent ones there were not more than threee or four The average was decidedly better than the average of the other kind of wheel, as even the most rabid advocate of wooden wheels would have been compelled to admit.

"The experience set me to thinking. Are we not 'going in' too strongly for wooden wheels? Or, to put it the other way, are we not making a mistake in letting the wire wheel go without a struggle?

"I am quite aware that the wooden wheel

is the fashion just now, and that it wins on looks. The case against the wire wheel is one of appearance only. The charge of its inferiority, except for very heavy vehicles, is either not seriously pressed or it fails to be demonstrated unmistakably. The burden of the song is simply that everybody wants wooden wheels, and makers fall over each other in complying with this demand.

"It is a fact well understood that wire wheels can be built just as strong as wooden ones. It is simply a case of proper designing and putting sufficient metal in, and the trouble with wire wheels, where it exists, is nearly always traceable to some defect in one or the other of these two things.

"As to the matter of repair, it is notorious that a wire wheel is much easier to fix than a wooden one. If to this be added a strength and durability quite equal to the wooden wheel, as well as quite a material saving in first cost, it is easy to see that the last word has not yet been said. As far as that goes, I look for a reaction. It may not come for a year or two, but it will come, and when it does the shoe will be on the other foot, for 'fashion' will call quite as loudly for the wire wheels as it is now doing for the wooden ones."

Otero's Aerial Performance.

It is not easy to tell which is cast for the principal part in a comedy which is to be played at Biarritz, France, next summer-the actress, the automobile or the balloon. The story is that Mlle. Otero, whose gyrations have delighted more than one continent, expects to take a novel ride in an airship next August. The balloon will be fastened to an automobile by a thin wire and will float at a height of 100 feet. There will be a rope ladder by means of which Mile. Otero may descend to the automobile in case of accident. A Brussels engineer is now at work on the airship, which will figure in what is designed to be a triumphal entry into Biarritz, the destination fixed upon by the French actress for the coming trip. The automobile will make a fast run through the country, dragging the airship along.

Driven to it by Schwab.

"Fearing that Charles M. Schwab might attempt to break a few automobile records in and around this town, the Council has passed an ordinance fixing the maximum speed of autos within the precincts of the town at ten miles an hour," says a Hammonton (N. J.) paper.

It is said that while out in his automobile a short time ago the King of Italy was stopped by a road mender, who was of the opinion that the royal chauffeur and his machine were not en regle with the rules for automobilists in Italy.

An automobile line between Oshkosh, Wis., and summer resorts along the lake shore is contemplated.

BRAKE, LAMP OR BELL?

Which is of the Greatest Importance?—One Man's Views on the Subject.

"Your editorial on braking facilities is one on the proper subject, and an expression of experience would doubtless do the industry good," writes a well known manufacturer to the Motor World.

"No one feature is more important than the brake of either a motor vehicle or a bicycle, and legislation compelling the carrying of ample brakes on both these vehicles would give more actual safety to the public than all the lamp laws and speed ordinances possible to frame.

"Of what good is an ordinance relating to the rate of speed if the motor vehicle cannot be stopped when occasion requires? It is no difference to the injured party whether he gets run over at four miles per hour or forty. The thing desired is that he escape entirely.

"The old saying, "What is everybody's business is nobody's' may be readily interpreted to apply to brakes. A dozen brakes on a vehicle are worse than none, for, since there are so many, none are kept in order. One brake, properly looked after, should be provided and kept in good condition. A further ability, such as an arrangement to make the motor hold the vehicle, is also good, but the more complication the less actual result.

"A further thought is that brakes should not produce friction except when applied, and I am sorry to say that this requirement is not met by many. Practically all the band brakes in use rub somewhere all the time, and must be exceedingly loose, as you state, if undue friction is to be avoided. This need not be so, for it is possible to produce a band brake of great power and yet free from friction when not applied.

"We aim to equip our vehicles with a brake of sufficient power to stop both the motor and the vehicle in a reasonable distance, or able to stop the vehicle alone so abruptly as to almost lift the passengers from their seats-in short, able to slide the wheels on the ground. For ordinary hills and ordinary slack-ups we simply throttle the motor, cutting off the fuel supply entirely, which causes the motor to act as a brake and brings the vehicle down very quickly. For hills or average grades this drag is sufficient. Where the grade is steeper the brake is used in addition, while at any time a tap on the controlling handle will knock out the ordinary gear and drop in the slow speed gear, bringing the vehicle up promptly and slipping the tires on the ground.

"We have used additional brakes, but find, as before stated, that the more brakes there are the less attention they receive; and if one is depending on the brake it should be in perfect order, while no one will deny that it is easier to keep one brake in order than more, and it is more likely to be done."



The Week's Patents.

698,860. Tire. Lionel D. Saxton, Philadelphia, Pa. Filed Sept. 16, 1901. Serial No. 75,459. (No model.)

Claim.—1. A tire having a tread provided with a base and shoulders, upon which shoulders rests a piece of rigid material, portions of which run through the tire at the shoulders and are vulcanized in the mass comprising the tire, and a channeled plate adapted to receive said base and having its side portions engage said piece.

698,888. Speed Regulator. Vincent G. Apple, Dayton, Ohio, assignor to the Dayton Electrical Manufacturing Company, Dayton, Ohio, a corporation of Ohio. Filed Aug. 16, 1900. Serial No. 26,999. (No model.)

Claim.—1. In a speed regulator the combination of friction wheel, a driving shaft, an arm fixed thereto, levers and hinged to the arm, centrifugal weight friction shoes and hinged to said levers, and adapted to engage a friction surface on said friction wheel, and springs and for normally holding said shoes in contact with said surface, substantially as set forth.

698,890. Motor Car. Herbert Austin, Erdington, England. Filed Feb. 19, 1902. Serial No. 94,774. (No model.)

Claim.—1. The combination with the pawl and ratchet device, and the starting and reversing mechanism of a motor vehicle or car, of a device controlling the engagement and disengagement of the pawl with the ratchet wheel, and means connecting said controlling device with the lever of said reversing mechanism, and operating to prevent the pawl from engaging when the mechanism is reversed for backing and to permit it to engage when the mechanism is set for stopping or for forward running.

698,891. Steering and Driving Gear for Motor Vehicles. Robert W. H. Bailey, Kingston-upon-Thaines, and Arthur W. Brightmore, Egham, England; said Bailey assignor to said Brightmore. Filed Dec. 2, 1901. Serial No. 84,401. (No model.)

Claim.—In motor driven vehicles wherein the steering is effected by means of the retardation of one or other of the driving wheels, the latter being driven by means of a differential gear, the combination of a brake device between the driving shaft and the sleeve carrying a finally driven unit of the differential gear, or between the frame carried on the driving wheels and the body of the vehicle, for the purpose of steadying or adjusting the sensitiveness of the steering, substantially as described.

698,909. Automobile. George P. Dorris, St. Louis, Mo., assignor of one-half to St. Louis Motor Carriage Co., St. Louis, Mo. Filed Oct. 19, 1900. Serial No. 33,614. (No model.)

Claim.—1. In a motor vehicle, a plurality of springs; hinge blocks fixed to the upper sides of the springs; hinge brackets connected to the hinge blocks; a frame or bed connected to the hinge brackets; bearing blocks connected to the lower sides of the springs; axles rotatably mounted in said bearing blocks; reaches connecting the forward bearing blocks; reaches connecting the forward bearing blocks, said reaches being pivotally mounted; hinge collars mounted upon the rear axle; a crank shaft mounted upon the frame; turnbuckles rejusting bars connecting the hinge collars of the axle to the crank shaft or the frame; a sprocket wheel upon the crank shaft; and a chain connecting the sprocket wheel so that by manipulating said

buckles, the entire running gear is moved forwardly or backwardly, relative to the bed, so that the sprocket chain is loosened or tightened, substantially as specified.

698,944. Roller Bearing. Frederick Heinzelman and Reginald Heinzelman, Belleville, Ill. Filed May 27, 1901. Serial No. 62,034. (No model.)

Claim.—1. In a roller bearing, the combination with an axle, of a hub, and two independent sets of conical rolls surrounding said axle, one set being arranged at each end of the hub and both said sets of rolls being inclined in the same direction.

2. In a roller bearing, the combination with an axle, of a sleeve surrounding said axle, a set of conical rolls arranged at one end of said sleeve between said axle and sleeve, and a set of conical rolls at the other end of said sleeve and surrounding said sleeve.

698,965. Connection of Strikers to Motor Vehicles for Mechanically Operating Electric Switches. William Kingsland, London, England. Filed Aug. 28, 1901. Serial No. 73,548. (No model.)

Claim.—1. In a device for operating electric switches, the combination with a practically horizontal member having a downwardly extending striking arm at one end thereof to act upon the tappet mechanism, of a vertical pivot pin upon which the other end of the horizontal member is freely mounted, and means for connecting the said pivot pin to the axle box of the car wheel axle, substantially as set forth.

699005. Vehicle. Wheel. Solomon E. Oviatt, Lansing, Mich. Filed Oct. 3, 1901. Serial No. 77,361. (No model.)

Claim.—1. A vehicle hub, constructed with an outwardly projecting annular bead forming an interior annular lubricating chamber in the inner wall of the hub, said wall flared outwardly adjacent to said chamber to increase the capacity of the chamber.

699,014. Igniter for Explosive Engines. John V. Rice, jr., Edgewater Park, N. J., assignor, by mesne assignments, to William O. Worth, Chicago, Ill.; William R. Donaldson, Louisville, Ky., and Henry W. Kellogg, Battle Creek, Mich. Filed Aug. 30, 1897. Renewed Nov. 3, 1900. Serial No. 35,391. (No model.)

Claim.—1. In a governor for gas engines, the combination with a tubular governor rod, of a rod within the same, centrifugally acting means connected with the inner rod, a sparking device, and a cam that actuates the sparker and is engaged by the aforesaid inner rod for the purpose of shifting said cam, substantially as described.

699,028. Automobile. Alfred L. Simpson and Harry B. Palmer, New York, N. Y.; said Palmer assignor to said Simpson. Filed Dec. 4, 1901. Serial No. 84,669. (No model.)

Claim.—1. An automobile, comprising a wheeled vehicle provided with depending lugs, an electric motor suspended from said lugs and mounted free to swing, gearing connecting said motor to a wheel of said vehicle, a longitudinal brace connecting said motor with some rigid part of said vehicle, and provided with a movable joint for shortening the same, and a thumbscrew for normally holding said movable joint in a predetermined position.

699,029. Controller for Electric Vehicles. Alfred L. Simpson and Harry B. Palmer, New York, N. Y.; said Palmer assignor to

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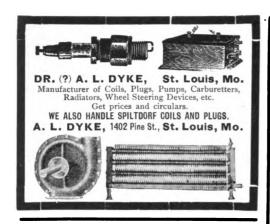
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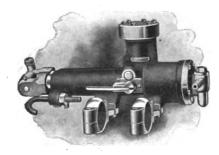
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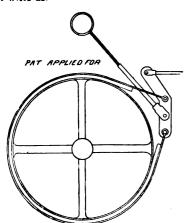
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& Central Avenue,

said Simpson. Filed Dec. 13, 1901. Serial No. 85.831. (No model.)

Claim.-1. A controller for electric vehicles, comprising contacts connected with a resistance, a movable electrode for engaging said contacts, and means for forming a short circuit about said contacts at the instant when the said electrode engages said contacts.

A controller for electric vehicles, comprising a commutator for reversing the direction of an electric current and actuated by an armature, a lever provided with an armature mating the armature of said commutator, and a current controlled device for temporarily exciting both of said armatures, thereby causing them to adhere together.

699,030. Means for Regulating the Supply of Water and Liquid Fuel to Steam Generators. John Simpson, Stirling, Scotland. Filed Nov. 29, 1901. Serial No. 83,993. (No model.)

Claim.-1. The combination with the two pump cylinders, plungers working in the cylinders and rigidly connected together for simultaneous action, of a rod for actuating the connected plungers, means for operating the rod, a spring yieldingly interposed be-tween the rod and its operating means for automatically varying the stroke of both pumps, and a locking device for forming a rigid connection between the rod and its operating means to thereby render the spring inoperative, substantially as described.

THE WEEK'S PATENTS.

699,284. Motor Vehicle. John E. Caps, Kansas City, Mo. Filed June 14, 1901. Serial No. 64,583. (No model.)

Claim.-1. In a driving attachment for a vehicle, the combination with a motor, of a spur wheel operated by the motor, a toothed track arranged to be engaged by the spur wheel and adapted to fit upon the inner side of the rim of a wheel, and means for securing the track to said rim.

699,427. Motor Vehicle. John E. Thornycroft, London, England. Filed June 1, 1901. Serial No. 62,718. (No model.)

Claim.-1. In a motor vehicle, the combination with a driving gear therefor, of a spring mounted frame, a motor carried by said frame, a train of gearing for trans-mitting the power from the motor to the driving gear, a bracket supporting that gear of the train which meshes with the driving gear, and a compensating connection be-

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tween the bracket and the spring mounted frame, substantially as described.

699,428. Vehicle Seat. Louis B. Truslow, Thomaston, N. Y. Filed March 12, 1902. Serial No. 97,834. (No model.)

Claim.-1. In a vehicle of the character described, the combination of a seat having a single depending supporting arm rigidly connected thereto at each end of the seat, said supporting arm being provided with a series of perforations to adjust the height of seat, a pivot bolt adapted to enter any of said perforations and support the seat, a bracket extended from either side of the depending seat-supporting arms and having down turned ends, and a spring directly connecting the down turned end of the brackets on each side of the depending supporting arms with the seat.

699,433. Sparking Igniter for Explosive Engines. Richard L. Young, Milwaukee, Wis., assignor of one-half to Thomas J. Price, Milwaukee, Wis. Filed July 8, 1901. Serial No. 67,446. (No model.)

Claim.-1. In a sparking igniter for explosive engines, the combination of a cylinder, electrodes extending into said cylinder and insulated therefrom, an electrical conductor extending from one of said electrodes and leading to the source of electrical supply, a rotatable cam shaft, an insulating sleeve mounted thereon, a metallic ring secured to and surrounding the sleeve, and provided with a contact stud projecting therefrom and adapted to make contact with the outer end of one of the electrodes on each revolution of the cam shaft, a metallic rod having one end in contact with the

metallic ring, and an electrical conductor connecting said rod with the source of elec-

699,493. Method of Cleaning Spongy Lead Plates for Storage Batteries. Rufus N. Chamberlain, Depew, N. Y., assignor to Gould Storage Battery Co., New York, N. Y., a corporation of West Virginia. Original ap-plication filed March 3, 1899; Serial No. Divided and this application filed 707,592. Nov. 9, 1900. Serial No. 35,982. (No specimens.)

Claim.—1. The process of cleansing a spongy lead plate from the active dissolving agent of an electro-chemical forming bath which consists in exposing said plate as a cathode in an electrolytic bath, such bath containing a solution relatively free from such active agent.

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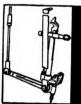


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Covert Motorette"

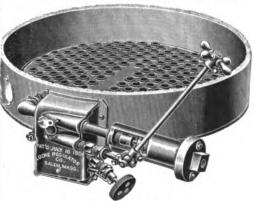


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Silk Hat Rye

\$3.20 sent to us will bring to you express prepaid by us, 4 full quart bottles of 7 year old Silk Hat Rye or Bourbon. Whiskey. Guaranteed pure and up to the standard in every particular. If not as represented return it to us and we will refund your money.

Remember, \$3.20 for a gallon of whiskey which could not be bought for less than \$5. if you were to pay the middleman's profit.

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the best materials obtainable are manufactured by most approved modern methods into the various parts, which are of unequaled strength and efficiency.

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No other Automobile has ever attempted such a trip.

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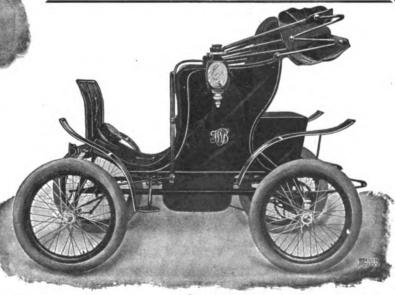
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We Tell You of Them in our Catalogs.

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George Hannan, 1455 California 5t., Denver, Col.
The Manufacturers Co., 97 Fremont 5t., San Francisco, Cal.
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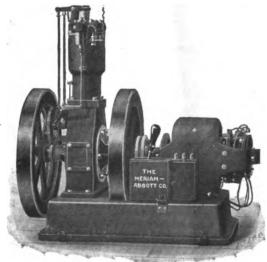


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THE PLANTS ARE MADE IN FOUR DIFFERENT SIZES.



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now has the great glory of being

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> without adding a drop of fuel or water to its original supply.

The White has no boiler and does not, perforce, depend on boiling water for its steam.

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is on its tires. They are the best. RIDE THE FISK AND RUN NO RISK.

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STANHOPE B.

AN exceptionally graceful and attractive model. Contains many desirable features which go to make the STANHOPE B. one of the most popular styles ever put on the market by the Locomobile Company of America.

> 10 Gallon Fuel Tank. 32 Gallon Water Tank 16 Inch Boiler and Burner. Klinger Water Gauge. 2 Double-Acting Brakes. Simplified System of Piping. Cylinder Oil Pump. Improved Lubrication of Engine. Steam Water Pump. Steam Air Pump. Heavy Steel Burner. Long Wheel Base.

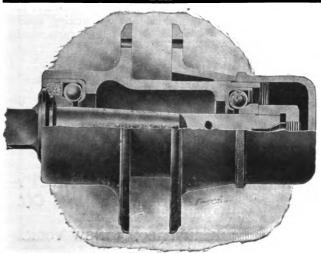
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We are now prepared to furnish these Hubs, Ball-Bearing and Key-Seated, for Automobiles weighing from 500 to 4,000 pounds.

Front Hubs are Ball-Bearing and are assembled on our well-known Steering Axles. Rear Hubs furnished with Ball-Bearings or Key-Seated.

> ALL RACES ARE GROUND IN POSITION IN HUBS. CONES AND CONE SEATS ON SPINDLES ARE GROUND TO GAUGE.

Hubs and Spindles are machined Right and Left.

WRITE US REGARDING YOUR REQUIREMENTS.

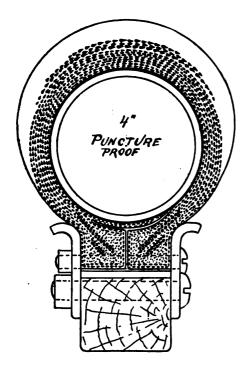
THE AMERICAN BALL-BEARING COMPANY, Cleveland. A. Ohlo, U.S.A.

If those tires on YOUR vehicle are not



DETACHABLES,

keep your purse close at hand and yourself prepared for trouble.



The GOODYEAR is the only tire that can be permanently repaired anywhere by anyone at any time. That question: "How far is it to the nearest repair shop?" has no significance or dread to those who use Goodyear's.

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Tire Troubles Stopped



By injecting one tube of AUTO-MOBILE NEVERLEAK into each of your tires your tire trouble will absolutely cease. AUTOMOBILE NEVERLEAK will preserve the rubber and fabric and will not prevent plugging or vulcanizing should a severe accident render such repairs necessary.

NEVERLEAK

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Are all they OUGHT to be and a little more; different from most steam carriages in that respect.

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WILL TELL YOU ALL ABOUT IT FOR THE ASKING.

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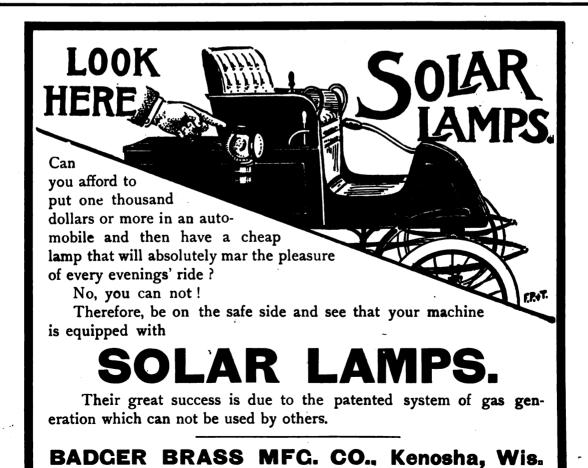
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NATIONAL VEHICLE COMPANY, INDIANAPOLIS, INDIANA.

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SPECIAL GENERATOR. SPECIAL REGULATOR.

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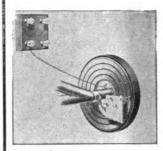
We invite experts to criticise.



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STEAMOBILE CO. OF AMERICA, 7 Wells St., KEENE, N. H. Branch—1325 14th St., N. W., Washington, D. C.

INSURE Against Annoying Police Mistakes.



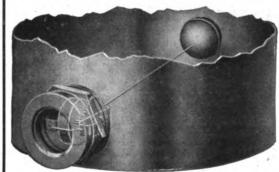
The Mott Speedometer

will enable you to ride up to the full, local, legal limits. There are 4 speeds and they can't be disputed.



Night riding is Safer, Pleasanter, Easier, when you have a Mott Gage Illuminator. We'll tell you more of what they tell you if you will write LAURENCE MOTT. 106 Sudbury St., Boston.

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JUST USE OUR

Tell Tale

The only device of its kind. Always tells at a glance all the gasolene that is on hand. Can be readily applied to the tank on any style of vehicle. Saves waste and quickly earns its price. Loss of air pressure, worn threads on plugs and fire dangers on steam vehicles entirely eliminated.

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ACTUAL FACTS ACTUAL FACTS SIX HORSE POWER 900 LBS. \$750.00

Double Cylinder Balanced Engine.

NO Vibration.



100 Miles
Capacity.
Speed 20.
20%
Grades.
Water for
300
Miles.

HYDRO CARBON.

NO GEARS.

STARTS FROM SEAT.

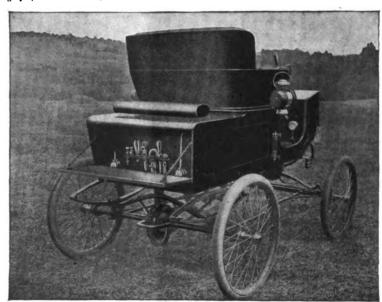
The Quickest and Easiest Controlled Machine ever built. Full Platform Springs. Rides as Easy as a Rocking Chair. Easy to Buy.

GOOD AGENTS WANTED. FRIEDMAN AUTOMOBILE CO.,
3 East Van Buren St., CHICAGO, ILL.

TRIED. TESTED. Proven.

The GROUT BROS. STEAM CARRIAGE

contains many good points cleverly designed. This illustration is an example. Drop the back and a complete tool box is before you. Like the arrangement of these tools are the other improvements.



Write for details of improvements.

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HIGH DUTY STEEL BALLS

ACCURATE TO 1-10000 OF AN INCH



EXACTLY SUITED FOR AUTOMOBILES

WE MAKE OVER 500,000 BALLS EACH DAY

THE AUTOMOBILE AND CYCLE PARTS COMPANY

BALL AND PEDAL FACTORY

Cleveland

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Tires are Excelled by None.

READ WHAT THE WALTHAM MFG. CO., WALTHAM, MASS., MANUFACTURERS OF THE ORIENT MACHINE, SAY IN THEIR CATALOGUE ABOUT INTERNATIONAL TIRES.

"TIRES.—After careful consideration of the tire question, we have decided that for all around use the regular 2% inch single tube International "Pox Brand" Automobile Tire is the most satisfactory. A tire of this kind, while slightly heavier and more expensive than some other varieties, has the advantage that it is secured on the rim both by cement and bolt'lugs, and in case of puncture, it is possible to ride with it a short distance to some convenient place for repair, which could not be done with most detachable tires."

Watch for our next advertisement to see what another leading automobile manufacturer has to say about International Tires.

INTERNATIONAL A. & V. TIRE COMPANY,

NEWTON UPPER FALLS, MASS.

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EXIDE BATTERY DEPOTS

For Furnishing, Charging and Caring for Exide Batteries:

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OTHER STATIONS WILL BE ANNOUNCED LATER.

WHEN ORDERING AN AUTOMOBILE

Specify the "Exide" Battery



THE ELECTRIC STORAGE BATTERY CO.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, May 22, 1902.

No. 8

MAYBACH QUITS

Famous Float Feed Patent Appeal not Taken— Collapse of a Gigantic Scheme.

Because a grasping policy was pursued when one of moderation would have been more in keping, suits brought in England for the enforcement of the Maybach patent on float feed carburetters have been abandoned.

This valuable invention is thus permitted to fall into "innocuous desuetude," and the plan of its owners to make the automobile world pay toll to them falls to the ground.

Formal notice has been given that the appeal from the decision of the British court will not be taken. Consequently it will now be possible to copy the Maybach at will, without paying royalties or being hampered by suits for infringement. Therefore the British Protective Association has won its fight, and users of the float feed type of carburetters everywhere will be benefitted.

The Maybach patents are fundamental in their character. Consequently, when the float feed type came into wide popularity it cut a considerable figure in the trade. Taking advantage of this fact, an absurdly high royalty—nothing less than 10 per cent of the value of the vehicle on which it was found—was demanded, and a movement against users of such vehicles began.

A royalty commensurate with the value of the device might have ben paid without a fight. But this demand was too much to be complied with, and an association was formed to fight the case.

Success crowned its efforts, and the validity of the Maybach patents was denied by the court. An appeal from the decision was contemplated, but has now been abandoned.

Serpollett Scores Again.

Only moderate speed was made in the races held on Monday last over a kilometre course at Bexhill, the estate of Lord De la Warr, near London. The honors of the day were carried off by M. Serpollet, who, with the mate to his famous "Easter Egg," covered a kilometre (.62 of a mile) in 411-5 seconds, or at the rate of 54.55 miles per hour.

Absorbed by new Company.

Joseph H. Hoadley, who recently bought control of the General Carriage Co., states that he has released control of the company to C. S. Drummond and his London associates and W. J. Arkell, of New York. Mr. Hoadley, however, will retain an interest and continue as one of the directors. A great deal has been said in certain quarters of late about the prospects, patents, assets and plans for reorganization. In this connection it is reported that the Manhattan Transit Co., incorporated at Albany this week, with a capital of \$10,000,000, will take over the charter and other assets of the General Carriage Co.

The Fifteen Leaders.

Under the law passed more than a year ago all motor vehicles owned in this State must be registered with the Secretary of State. A study of the list of those so registered is exceedingly interesting. Taking the fifteen vehicles most largely represented, the following table is made up:

Locomobile, 347; Mobile, 138; Winton, 104; De Dion, 48; Columbia, 45; Gasmobile, 39; Oldsmobile, 32; Panhard, 32; Woods Electric, 22; Baker, 20; Haynes-Apperson, 20; Autocar, 18; Riker, 17; Foster, 14; United States Long Distance, 13.

Work Became too Heavy.

Finding that the steadily increasing demands made on the chairman of the Law Committee of the Automobile Club of America encroached on the time set aside for the conduct of his legal practice, Mr. George F. Chamberlin has been obliged to relinquish that position, which he has so long and ably occupied. He is succeeded by W. W. Niles, one of the members of the committee.

Ordeal Comes Friday.

Friday of this week is the date set for the appearance before the Board of Governors of the Automobile Club of America of the three members accused of running their automobiles at a speed in excess of the legal rate last month. The accused men are Dr. J. G. Lyman, K. A. Skinner and E. B. Gallaher.

FARMAN WINS

French Alcohol Race From big Field of Competitors—Had Government Support.

Rather meagre cable reports of the alcohol race over roads in Northern France which was run on Thursday and Friday, May 15 and 16, show that the winner was Maurice Farman, who was the second of eighty-nine contestants to start. W. K. Vanderbilt, jr., from whom much was expected, met with a slight accident when only a few miles out on the first day and was compelled to withdraw. A small pinion on his car broke and threw him out.

The time made was good on the first day, but showed a very marked falling off on the second. The total distance covered was 922 kilometres (572½ miles). The start was made from the fort at Champigny, and the cars proceeded through Chalons-sur-Marne, Rethel and St. Quentin to Arras, the distance of the day's run being 410 kilometres. The second day's journey was from Arras to Boulogne, Abbevilie, Dieppe, Gisors and Vernon to St. Germain, where the race ended, the distance of this run being 512 kilometres.

On the first day eighty-nine vehicles started at intervals of two minutes apart. Farman was second away and was first to reach Arras, 410 kilometres (about 254½ miles). His time to that point was 4 hours 48 minutes 5 4-5 seconds.

The distance between Arras and St. Germain is 512 kilometres (310 miles). This was covered on the second day by Farman in 7 hours 7 minutes 464-5 seconds. His official corrected time for the double trip was announced as 11 hours 57 minutes. This is an average of nearly 77 kilometres, or a little over 47½ miles an hour.

Twenty-five Burned.

The three story building at Broad and Vine streets, Philadelphia, a part of which was occupied by the Pennsylvania Electric Vehicle Co., was destroyed by fire on Tuesday. About twenty-five automobiles were burned.



THE CRUCIAL TEST

Alcohol Must Show Better Results in French Race—Importance of the Event.

French Bureau Motor World, 2 Rue d'Abbeville.

Paris, May 9.—Alcohol is the predominant power in automobilism just now. We are entering upon the alcohol week when the spirit is being put on a pedestal for beet root growers and viticulturists to bow to as the saviour of their respective industries. It is being flattered and cajoled and is being followed by a long suite of Ministers and Mayors, agricultural societies and distilling associations, engineers and automobile makers, who are making a triumphant progress through Northern beet departments. There are receptions and dinners, special trains and speeches, mean time the alcohol vehicles are racing through beet fields from Paris to Arras and from Arras to Abbeville, Dieppe and St. Germain, leaving behind them an incense which smells sweet to the growers of heet

To the American this big attempt to replace gasolene with alcohol has only a relative interest. In the States there is not much chance of gasolene finding a strong competitor in the agricultural spirit, at least not under present conditions, and the only hope of alcohol supplanting the petroleum products lies in its being used more economically. If this be done the movement in favor of alcohol will certainly invade the United States and become the platform of agriculturists who will regard the automobile as a big factor in the prosperity of their industry, but the problem of economically using alcohol in motors must make enormous headway before it can have the slightest chance of competing with such a cheap and efficient product as gasolene.

Up to the present alcohol has done little to justify the expectations of those who are advocating its employment. After three or four years of propaganda there are very few vehicles running with spirit and it is significant that not a single one of the automobiles was using alcohol down at Nice, and in the consumptive test of industrial vehicles from Paris to Monte Carlo alcohol was conspicuous by its absence. When makers are going for economy and reliability they never use the agricultural spirit. It is now perfectly clear that with the lower calorific power of alcohol vastly more of it must be burned to give the motor the same efficiency as with gasolene, and unless it can be sold 25 per cent cheaper there is not the slightest chance of its being adopted by automobilists.

The object of the Minister of Agriculture in carrying out his race and tests is to popularize alcohol and show that it can be conveniently used in automobiles, and when this is done the government will adopt some measure for giving a preference to the new spirit. There does not seem at the moment to be much opening for reducing the cost of alcohol, though it may be expected that something will be done to make it a little cheaper than it is now, but the intentions of the government are more in the way of increasing the cost of gasolene by putting on new duties, or else monopolizing its manufacture, so that the automobilist will have every advantage in using the agricultural spirit. The question is certainly fraught with considerable importance for the agricultural industry. The consumption of spirit is growing so enormously that if the beet growers had a monopoly they would have as much as they could do to supply the demand, and it is quite possible that a shortage of supplies in the future may increase the cost of alcohol, for it is intended to be used not only for motors, but for every purpose of light and power.

To-day begins the preliminary arrangements for the test, and industrial vehicles from Beauvais to Paris, and on Thursday next will take place the test of touring carriages and the race of speed automobiles. When these are over we shall have full data for an exact comparison between the economy and efficiency of alcohol and gasolene, and be able to see what are the prospects of the raw spirit. The results cannot fail to be interesting.

The race will be one of the biggest events of the year, and the pessimists say that it will be the last race to be held in this country, but it is impossible to give an opinion on this point until application has been made for permission to run off Paris-Vienna. Meanwhile nearly all the makers are participating in the Northern Alcohol Circuit, but though it is an international event, only one foreign vehicle has been engaged-a 40 h. p. Mercedes-Simplex, which is to be driven by Mr. W. K. Vanderbilt, jr. He ought to have a very good chance of winning to judge from the marvellous performances he accomplished last week in attempts on the flying kilometer record.

It will be remembered that when at Nice Mr. Vanderbilt and Baron Henri de Rothschild, who both had Mercedes-Simplex vehicles, decided to test their abilities as automobilists by running a match over a distance of 125 miles. The match was to have taken place last week from Chartres. The two automobilists went down there accompanied by David Wolfe Bishop, but the weather was so abominably bad that the match had to be postponed. Mr. Vanderbilt, however, would not return without seeing what his vehicle could do in the way of breaking records. When the rain stopped they left Chartres for Ablis, where they found a fine stretch of level road. Each made three attempts on the kilometer, Baron Henri de Rothschild doing 364-5 secs., Mr. Bishop, 36 secs. and Mr. Vanderbilt, 32 2-5 secs., which beats the world's record for gasolene automobiles by 3-5 secs.

THIRTY-NINE NOW

And Entries are Coming in Very Rapidly for Non-Stop Run.

Entries for the 100 mile non-stop run of the Automobile Club of America received to date fall just one short of reaching the two score mark. Of these 27 belong in the gasolene classes and 12 in the steam class. No electric entries have yet been made. The completed list follows:

and completed not tone			
Entered by. H.P.	Name of vehicle.		
International Motor	Molodo		
Car Co 7½ Grout Bros 4½	Toledo		
	Stanhope		
W. H. Wells 4½ W. H. Wells 4½	Prescott		
A. G. Southworth. 7½	Prescott Toledo		
H. B. Weaver 7½	Toledo		
Grout Bros 7½	Grout		
F. E. Magee 4½	Prescott		
Lane Motor Vehicle			
Co10	Lane		
Locomobile Co. of			
America 31/2	Locomobile		
Locomobile Co. of			
America 31/2	Locomobile		
Locomobile Co. of			
America 6	Locomobile		
Gasolene			
Entered by. H.P.	Name of vehicle.		
H. W. Whipple12	Darracq		
Jefferson Seligman.12	Mors		
H. S. Chapin 9	Haynes-Apperson		
H. S. Chapin6	Haynes-Apperson		
Peerless Mfg. Co16	Peerless		
Peerless Mfg. Co16	Peerless		
C. J. Field10-12	Richards		
Alex. Fischer10-12	Richards		
A. J. Lamme 7	Long Distance		
Ward Leonard Elec-	Walabanha akan		
tric Co 5	Knickerbocker		
Ward Leonard Elec-	Wniekowhoekow		
tric Co 5	Knickerbocker		
Ward Leonard Elec-	Knickerbocker		
tric Co 5 Charles D. Cooke. 9	Darracq		
F. A. La Roche 9	Darracq		
A. R. Shattuck12	Panhard		
Alden L. McMurty.12	Packard		
Alden L. McMurty.16	Packard		
Coo F Chamberlin 16	Panhard		
Sidney D. Rinley 25	Gasmobile		
Donor P Pierce 814	Pierce		
Geo. F. Chamberlin.16 Sidney D. Ripley25 Percy P. Pierce 8½ E. E. Britton16	Panhard		
Jefferson Seligman.12	Mercedes		
Col J J Astor12	Panhard		
Col. J. J. Astor12 Willis S. Kilmer12	Panhard		
E. Clarence Jones10	Benz		
Charles E. Miller12	Coffee & Sons		
Osborn W. Bright.12	Packard		
	_		

Electric in Staten Island Contest.

Mindful of the good showing electric vehicles have always made in speed contests, one entrant for the one mile contest of the Automobile Club of America has pinned his faith to that type of vehicle. Steam is also represented by one entry, and these, with six gasolenes, comprise the list made up at this date. Following is the list:

	Electric.	
Entered by.	H.P.	Name of vehicle
W. C. Baker	7	Baker
	Steam.	
H. M. Wells	41/2	Prescott
	Gasolene	. "
L. S. Thompson.	8	Renault
H. Ward Leonard	1 8	Knickerbocker
Jefferson Seligma	n12	Mors
W. P. Norton		Mercedes
Wm. Guggenheim	124	Panhard
T T Reitton	16	Panhard

The Motor World.

EYE GLASSES BARRED

Chicago Automobilists Limited to Spectacles— Other Unesous and Absurd Rules.

It is no easy matter to obtain the right to run an automobile in Chicago. Residents of the Windy City are required to go through an examination, the passing of which is far from being child's play.

Under the city ordinance these provisions are to be found:

"No automobile, autocar or other similar vehicle shall be propelled or driven upon or along any street, alley or other public way in the City of Chicago unless the person in charge or control of such vehicle, and who is acting as the operator thereof and as such operator controls the means of propulsion of any such automobile, autocar or other similar vehicle, shall be a person duly licensed by the City of Chicago to act as an operator of such vehicles in the manner hereinafter provided; and for the purposes of this ordinance the terms or names 'Automobile,' 'Autocar' and 'other similar vehicles.' wherever and whenever used in this ordinance shall be held to embrace and mean, and are hereby defined to mean, any vehicle driven or propelled upon or along the streets, alleys or other public ways of this city, whether for purposes of business or pleasure, or for both, the motive power of which is electricity, compressed air, naphtha, gasolene, kerosene or other motive power other than animal power or motive power supplied solely by the muscular exertion of a human being. Provided, however, that nothing herein shall apply to the operation of any locomotive, gripcar, motor, trolley car or other vehicle used by any steam or street railway upon and along any track or tracks owned or authoritatively used by any steam or street railway company or corporation.

"No automobile, autocar or other similar vehicle shall be propelled or driven upon or along any street, alley or public place in the City of Chicago at a speed exceeding eight (8) miles per hour, and such vehicle when in motion must be kept to the right and shall observe the rule of the road as laid down for all other vehicles.

"Each and every automobile, autocar or other similar vehicle driven or propelled upon or along any street, alley or public way in the City of Chicago, shall be equipped and supplied with an alarm bell or gong of not less than four inches in diameter, and the same shall be sounded at street crossings and whenever else deemed advisable by the operator of such vehicle to be sounded for the purpose of notifying pedestrians or others of the approach of any such vehicle, and each automobile, autocar or other similar vehicle shall be equipped with a brake or set of brakes, which shall be of sufficient power when applied to bring any such ve-

hicle, when at a speed of eight miles an hour, to a full stop within ten feet from the point such vehicle was when such brake was applied, and all such vehicles shall carry a lighted lamp, or lamps, in a conspicuous position on such vehicle whenever in motion on any street, alley or other public way at any time after dusk and before dawn."

Each applicant for a license is first examined for physical requirements, which are as follows:

Each applicant must have good use of both hands and arms; also both legs and feet.

He must have good eyesight. If the vision is corrected by glasses, they must be securely fastened to the head by a spectacle frame.

He must not be color blind.

He must be free from epilepsy.

He must be free from heart disease.

He must not be dipsomaniac.

He must not be subject to fainting spells.

He must not be of reckless disposition.

Most Wise Judge.

Replete with common sense, and most timely as well, is the decision of a Detroit (Mich.) judge. He holds, in effect, that the physician on a life saving errand should be allowed some latitude and the ordinances regarding the maximum speed of automobiles be interpreted in a most liberal spirit.

"If the doctor can show that he ran his automobile at the speed charged in the endeavor to save life I shall suspend sentence," the judge said.

"The fire department when it hurries through the streets to save life and property, the drivers of ambulances hurrying to the scenes of disaster and accident, are not complained against, and I think a physician should not be convicted for fast driving when his haste is caused by his desire to save a human life."

Judge Phelan made these remarks when Dr. Arthur Lefebvre was on the witness stand to explain the charge of driving his auto vehicle along Lafayette avenue at a speed of eighteen miles an hour.

The doctor stated that he was making a professional call. His sister-in-law had been severely burned and was suffering from an attack of exhaustion due to the shock. It was necessary that he reach her bedside as quickly as possible.

Judge Phelan suspended sentence.

The Newest Title.

It is probable that such functionaries as the Keeper of the Robes, the Master of the Back Stairs and others whose appointments date back centuries will look askance upon the mushroom "Master of the King's Motor Car," who has just been appointed by Edward VII. To Mr. Graham White—not even a Bart. it will be noted—has been offered the honorable post, which carries with it the distinction of driving the King and supervising all the motor arrangements. A nominal salary is attached, but the post is really one of honor.

RULES ARE REVISED

Changes of Importance in Non-Stop Run Regulations—Speed Definations Precise.

In the light of experience gained, the committee in charge of the 100-mile non-stop run of the Automobile Club of America have made a number of changes in the rules and regulations of the run.

The most important of these are the change of the starting hour from 8 to 9 o'clock, the greater care exercised in defining the speed possibilities and providing penalties for their violation, and the placing of the responsibility therefor on the operator of the vehicle, no matter whether the observer notifies him or not.

As already stated, three rates of speed must be observed during the run, viz., eight, fifteen and twenty miles per hour. When a green flag is passed the speed must be slowed to eight miles an hour, and not until a white flag is met with must this be increased. Outside of the green flag limits twenty miles is permitted in this State and fifteen miles in Connecticut. Detours made for the purpose of arriving at controls ahead of time will be counted as stops.

The most important rules, including the amended ones, are as follows:

It will be assumed that every contestant is acquainted with the rules of the contest, and by entering therein he agrees to abide by said rules. In the event of dispute concerning the interpretation of the rules the decision of the Contest Committee shall be final. The committee reserves the right to alter or amend these rules from time to time as it may deem expedient.

OBSERVERS.

(a) Every vehicle shall carry an official observer, who will be provided by the club.

(b) Observers will record the actual time of the start and completion of the contest, and also the time of all stoppages from the actual stop to the actual start of the wheels, from whatever cause, and the cause of each stop must be recorded in full on the record sheets with which they will be provided. Observers will also keep an accurate record of the amount of gasolene put into the tank after the start.

(c) It shall be the duty of the official observer to caution the operator of the vehicle in which he rides when he has used less time between controls than that shown on the schedule, but any action or lack of caution from the observer is not to relieve the operator of the vehicle from his responsibility concerning the speed. Should the observer's caution be disregarded, it shall be the duty of the observer to note this fact upon his record sheet.

(d) Observers may render any assistance within their power to the operator of the

INSTRUCTIONS TO OBSERVERS.

- (a) Observers will report to the clerk at the clubrooms, Fifty-eighth street and Fifth avenue, at 8 a. m. on the morning of the contest and be assigned to the vehicles in which they are to ride.
 - (b) Each observer will provide himself



with a watch, which he will set by the clock over the window of the Plaza Bank. He will also provide himself with a mackintosh,

- (c) Lunch for the observers will be provided by the operators of vehicles.
- (d) Observers when assigned to a vehicle will go to that vehicle and not leave it under any circumstances, except in case of illness. Should an observer at any time be incapacitated from continuing the run, he will turn over his time card and official number to the operator of the vehicle, who will complete the record as far as the next control, where a new observer will be provided.

PASSENGERS.

Each vehicle shall carry at least two passengers, one of whom shall be the official observer appointed by the club.

STOPS.

- (a) All stops from whatever cause will be timed and recorded by the official observers. Stops for the following causes will be considered involuntary stops, and will not count against the vehicle or render it ineligible to compete for a certificate, although such stoppages must be recorded as set forth above:
 - 1. Tire troubles.
 - 2. Stoppages by the police.
 - To avoid frightening timid horses.
 - 4. To render aid in case of accident.
 - 5. Impassable railroad crossing.
 - 6. Road blocked by traffic.
- 7. Demands of nature.
- (b) If necessary, the motor in any vehicle having an explosive engine may be stopped during the time required for repairing tires or because of frightening horses.
- (c) During stoppages from any of the causes above enumerated the vehicle shall be subjected to no attention or manipulation of any kind, except replacing or repairing tires, and shall proceed as soon as the cause for stoppage has ceased.

SPEED.

- (a) An average speed of eight miles per hour (exclusive of the involuntary stops mentioned in Rule IX) must be maintained over the whole course to render a vehicle eligible for a certificate.
- (b) On passing a green flag, which will be placed on the right side of the road at the entrance of all towns, on the outward journey, no speed in excess of eight miles per hour will be permitted until a white flag is reached, when a speed not exceeding twenty miles per hour will be permitted in the State of New York, and not exceeding fifteen miles per hour in the State of Converticut.

No average speed for the run in excess of fifteen miles per hour will be recognized or permitted.

- (c) To prevent excessive speeds vehicles will not be permitted to arrive at and pass the first control, at Mianus (33 1-3 miles) before the expiration of 2 hours and 15 minutes from the time of departure from the start, nor to pass the turning point at Southport and return to the second control at Mianus (66 2-3 miles) before the expiration of 4 hours and 30 minutes from the time of departure from the start, nor to arrive at the finish in New York City before the expiration of 6 hours and 40 minutes from the time of departure from the start. Vehicles which arrive at said controls before such times will by that fact be subject to disqualification.
- (d) Detours to avoid arriving at controls before the time above mentioned will be counted as stops.
 - (e) Any driver, owner, nominator or man-

ufacturer of any vehicle taking part in the contest who shall be disqualified shall have his or their names reported to the secretary of the American Automobile Association, and such driver, owner, nominator or manufacturer will be disqualified by said association.

STARTING OF THE CONTEST.

All steam and gasolene vehicles entered for the contest must report on Friday morning, May 30, at 7 a. m., at the corner of Fifty-eighth street and Sixth avenue, where gasolene and water tanks will be examined by the committee's representatives and any shortages replaced so that all such tanks shall contain their full capacity at the time of starting.

The vehicles will then line up, irrespective of numbers, in Fifty-eighth street, on both sides of the street, facing east. The first vehicle will take its place in Fifty-eighth street at the corner of Fifth avenue. Entry into Fifty-eighth street must be made from Sixth avenue. No vehicle will be permitted to enter from Fifth avenue or from the Plaza. The vehicle will be started at half-minute intervals.

The start will be made at 9 o'clock sharp.

GASOLENE AND WATER CONSUMPTION.

Every vehicle driven by an explosive motor shall have its water tank and gasolene tank full at the time of the start. On the return of such vehicle at the finish in New York the gasolene tank will be refilled and the amount of gasolene required for such purpose accurately measured and recorded.

Every vehicle driven by steam shall at the start have the gasolene and water tanks filled full. At 33 1-3 miles from the start the water and gasolene tanks will be filled full and a record kept of the same. At 66 2-3 miles from the start the water and gasolene tanks will be filled full and a record kept of the same. On finishing the run at New York the water and gasolene tanks will be again filled full and a record kept of the same.

The club will furnish the necessary gasolene and water required to fill tanks at the points above mentioned.

By this method an accurate record will be kept of the amount of gasolene used by vehicles driven by an explosive engine, and the amount of gasolene and water used by vehicles driven by steam.

PROTESTS.

Any one desiring to enter a protest must deposit with a member of the committee \$10, which sum will be retained by the club if the protest is not sustained. He must submit his protest in writing before 11 p. m. of the day of the contest, when it will be considered by the committee at the earliest practicable moment and decision rendered.

FINISHING OF THE CONTEST.

The finish of the contest will be made in a roped-off inclosure on Sixtieth street, east of Fifth avenue. Every vehicle finishing must enter this inclosure at slow speed and not leave it until ordered so to do by the committee or their representatives.

BACK TO MULE DAYS

Goes Philadelphia When Framing a Speed Ordinance—Seven Miles Fast Enough.

Philadelphians long ago ceased to be restive under the imputation that their town was slow. Fun of the broadest kind is poked at the latter on all occasions, and it has come about that the average denizen of the Quaker City rather enjoys the shafts aimed at him, having ever ready the retort that he enjoys somnolence.

It is not surprising, therefore, that the automobilists have aroused the ire of the lawmakers of the city between the rivers. Automobiles go at a pace slightly greater than a walk; and that is flying in the face of all precedent, is heresy of the rankest kind. After protesting against a repetition of the offences, and without avail, the law is to be invoked for the purpose of putting a stop to it. And the method adopted is peculiarly Philadelphian.

It appears that the legal rate of speed on the asphalt as well as the grass grown streets of the ancient town "for vehicles drawn by horses and mules"—a relic of the days when mules dragged the street cars along cobble paved ways—is seven miles an hour. Now, automobiles are to be linked with these horse and mule drawn vehicles. Witness the following ordinance, introduced in Select Council by Councilman Patton:

"An ordinance to regulate the speed of automobiles, bicycles and all other vehicles in the streets, roads and all other public ways in the city of Philadelphia.

"Section 1. The Select and Common Councils of the city of Philadelphia do ordain, That from and after the date of the passage of this ordinance it shall not be lawful for any person or persons to propel to cause to be propelled, on any public street or any other public way in the city of Philadelphia, any automobile, bicycle or any other vehicle of any kind, by whatsoever name they may be called, at any faster rate than is now permitted, 'which is not faster than seven miles an hour' for vehicles drawn by horses or mules, and that for each offence the person so offending shall be liable to immediate arrest, and shall be fined not less than \$10 nor more than \$50, at the discretion of the magistrate, which fine shall be collected as fines of such character are now collectable by law

The ordinance has been referred to the Committee on Law, and is being deliberated upon by that august body. No action has yet been taken upon it.

Information in Full.

Details regarding the route of the forthcoming 100-mile non-stop run of the Automobile Club of America are given in a little pamphlet which the club has just issued. It contains a minute description of the road, each turn being outlined. Opposite the letterpress there is found the three-section map of the couse, published in the Motor World last week. With this guide before him the operator can scarcely go astray.



Published Every Thursday
By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING.

154 Namau Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Leaden Office, 83 Pleat Street, Paris Office, 2 Rue d'Abbeville,	•	:	C. V R. P	V. BR	OWN. LINS.
Subscription, Per Annum [Postag Single Copies [Postage Paid] .	e Pa	id]			\$2.00 Cents
Fereign Subscription Lavariably in A	•				\$3.00

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

These who are interested in motor vehicles will find the melatice and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N. Y. Post Office, November, 1900.

NEW YORK, MAY 22, 1902.

Worth an Investigation.

A case where zeal much outruns discretion is found at Buffalo, N. Y., where the council recently passed an ordinance fixing the maximum rate of speed of automobiles in that city at seven miles an hour.

Not only is this ordinance strongly suggestive of the dark ages, but it is a plain violation of the law of this State.

Says the Doughty law, passed a little over a year ago and still in force:

"No ordinance, rule or regulation adopted by the authorities of any municipality in pursuance of this section, or of any other law, shall require an automobile or motor vehicle to travel at a lower rate of speed than eight miles per hour within any city, town or village of the State."

It would be interesting to know by what right a municipal assembly essays to set such a mandate at naught.

Would it not be well for the Buffalo Automobile Club, the American Automobile Association or the American Motor League to investigate the matter?

Importance of the Alcohol Test.

It will be interesting to see whether the latest attempt of the rFench Government to induce motor vehicle makers and users to give the preference to alcohol produces any more tangible results than have previous ones.

The action of the government is readily understandable. Besides being a good electioneering dodge to urge it, the plan of substituting alcohol for gasolene has no small merit in itself. If the change were made it would mean a great deal to the struggling farmers who make, or could make, the new explosive liquid. The consumption throughout the country would be very considerable, and as the cost would be high, even under the most favorable circumstances, a very nice and, in the aggregate, a very considerable, sum of money would find its way into their pockets.

The government itself would not be either the gainer or the loser directly. It would tax alcohol just as it does gasolene, and in both cases the consumer would pay the tax.

But at the present time the bulk of the money paid for gasolene goes into foreign pockets. Gasolene is a product of other lands, and if by any means a home product could be substituted for it there would undoubtedly be great rejoicing. Apparently the only sufferers would be the producers and sellers of gasolene.

A little probing of the matter, however, will demonstrate that this view is quite erroneous.

Expensive as gasolene is in France, costing some three times as much as it does in this country, alcohol is even more so. Not only that, but if the results obtained from its use are equal to those obtained from gasolene, they are barely so; some observers even hold that alcohol is inferior. Mixture with gasolene increases its efficiency, and this course is usually resorted to. But the consumption of alcohol is greater than is that of gasolene, so that the additional disadvantage is encountered of requiring a greater quantity-therefore increased tank facilities-of liquid to run an alcohol vehicle a given distance than would be the case with a gasolene one.

In other words, the French user is asked to put up with an inferior and more costly fuel, the maker required to build cars adapted to take this inferior product.

Patriotism is the lever which is relied on to accomplish all this.

But it is extremely doubtful whether even the patriotic Gaul can bring himself to the point of sacrificing himself for his country in this way. Therefore anything short of complete success in the race of last week would be likely to put a quietus on the alcohol propaganda, for the present at least.

If the race had been run over the best class of roads matters would not look very promising, for the time of the winner is considerably slower than we have been accustomed to expect. It figures out quite a little under fifty miles an hour, instead of over. But it is quite probable the roads in the northern part of France are inferior to those leading to Bordeaux and Berlin, and this may account for the difference.

Only fuller reports will set this matter at

He Has a Hard Road.

No idle threats are those indulged in by Mayor Carter Harrison of Chicago against reckless automobilists who, it is claimed, are doing much to bring the pastime into disrepute in that city.

He threatens to revoke the license of any automobilist who goes faster than eight miles an hour, which is the limit of speed in Chicago. Moreover, he promises a term in prison for incorrigible offenders. "Young men with more money than brains," he says, "who run their racing automobiles in defiance of city ordinances and with utter disregard of the lives of the men, women and children who may happen to be crossing a street or boulevard, will be sent to the Bridewell without the option of a fine if they continue in their present insensate career."

As we point out in another column, the Chicago automobilist is completely at the mercy of those in authority—that is, if he does not behave himself.

He must first secure a license, after passing a severe and searching examination, in the course of which he must demonstrate that he is sound in body as well as in mind, of good character and of a careful disposition. It is even specified that he must have good eyesight and cannot wear eyeglasses. If his vision is corrected by glasses, they "must be securely fastened to the head by a spectacle frame."

After passing through this severe ordeal he is not safe. Any member of the Board of Examiners, who are appointed by the Mayor, has power to suspend his license, without permitting him to be heard in his own defence. The license can be revoked by the entire board, although it must give the operator a hearing before doing this.

The time is coming, and is very near at hand, when such archaic rules will be swept away. The motor vehicle has met with the fate of all innovations, and been flercely fought by people who a few years hence will be its best friends and most thoroughly ashamed of their shortsightedness of to-day.

The steam locomotive, the trolley car, the bicycle and every other step in the direction of progress in locomotion—all passed through the ordeal and emerged from it successfully.

It does seem, however, as if the automobile was being baited a little more severely and generally than its predecessors. Perhaps this is only in seeming. But few people will dispute that the Chicago automobilist is getting all that is coming to him, as the song has it, and a little more, too.

As to the Future.

Only a year ago the French manufacturers were facile princeps in the art of building gasolene racing cars. They were able to turn out vehicles which, for exceeding speed and power, combined with reliability, were almost without rivals.

When, therefore, this supremacy in their chosen field was successfully challenged and a car from across the German border won laurels in open contests with them, there was surprise and wonder expressed. The attack came without warning. At a single bound the German car leaped into the place it coveted, and has been in the foremost rank ever since.

Until lately, and even then with but a few exceptions, American makers have given the racing car a wide berth.

The conditions in this country are very different from those found elsewhere. Public sentiment is against indiscriminate speeding, and the great majority of our roads are utterly unfit to race on. Consequently, the vehicle bearing a strong resemblance to the familiar horse and buggy, and designed to travel only a little faster, comparatively speaking, than it, is the one most in demand. This our makers early set out to build.

But the world moves, and if we are not going to pursue the royal sport of racing with the same avidity as our European compeers we are at least going to follow their example in turning out a larger quantity of high powered, high speeded vehicles than would a few years ago have been thought possible.

Already great strides in this direction have been made.

We have some cars of the class referred to now. There are imitations, and good ones, and others which, while showing the influence of foreign designs, are yet marked by that originality that seems to be almost inseparable from the products of American brains and hands. Furthermore, their career has been attended with a success that cannot but be regarded as extremely gratifying.

That the future holds in store, what the accepted standard of next year or the year after will be, whether the Germans will hold and even improve on the advantage they have gained, or will be obliged to yield place to their French rivals—these are questions that cannot be answered at this time.

The only thing certain is that we shall progress, and that in the direction which is universally admitted to be the right one.

Following a Good Teacher.

The lessons of experience have been pretty thoroughly digested by the committee in charge of the non-stop run which is to be held next week.

Everything that the experience of the last run, added to that of previous contests, suggests being done has been done. Points that seemed trivial until the time of trial came, and then proved sources of trouble, have been, to all appearances, covered in such a manner that mistake or misunderstanding seems to be impossible.

The great bone of contention—the speeding evil—is the most striking example of this.

Violations of the rule in this contest will, if made, be open and flagrant, as indefensible as they are unwarranted. There can be no shifting of responsibility. The rules stare all participants in the face, and they cannot possibly dodge. The observers have their duties; but if they omit to perform them that fact will not relieve the operators in the slightest particular of their responsibility. The latter must shoulder the blame, and in entering the contest they bind themselves to do so without complaint.

If the execution is on a level with the conception the run will undoubtedly be writ down a success.

The yellow hued New York World is one of the most persistent of red flag wavers. It has acted its full part in playing on the fears of the public and in making it appear that automobilists are but a calss of wealthy aristocrats whose chief delight is laughing at the law and running down the poor and lowly. It is a fact, however, that the World's steam delivery wagon is and long has been the chief scorcher and lawbreaker of downtown, New York. The manner in which that

light vehicle goes the pace in the most crowded streets is a tribute to the daring and expertness of its operator, but it does not in the least lessen the World's culpability and hypocrisy. Consistentcy, however, never was among the World's virtues. Sensations at any price, truthful or otherwise, seems its dominating principle.

Not until an approximately perfect roadbed is built for the automobile to travel on will it be able to equal the best records of the railed locomotive. For the short distance a mile in 0:513-5, and for the long a rate of something over 50 miles an hour is the best the motor vehicle has accomplished. This will probably be bettered slightly this year. But it is a long way behind the locomotive, with its mile under 40 seconds and its 14.8 miles in an even 9 minutes, a 98.66 rate. The latter remarkable run was made last month on the Burlington and Missouri River Railroad, between the two stations of Eckley and Wray, Col.

There is no doubt about it, foreigners like plenty of noise with their motor vehicles. We have the testimony of Henry Fournier that his compatriots rather enjoy the ceaseless pop-pop of the exhaust. Now it is reported that the owner of one of the newest foreign racing cars, which is noted for its comparative silence, has had a by-pass fitted into the muffler so he can discharge the exhaust in the open air; this "makes a noise like the rattle of a Maxim gun." It may be added, in palliation of the offence, that this automobilist, who, strange to say, is English, does not use the by-pass habitually. It is only when he desires to give warning of his approach that he switches it into operation.

It was a characteristic trick of the fickle jade Fortune that the man and car most talked of and most fancied for the alcohol races now taking place in France should meet with an accident compelling withdrawal almost at the outset. Such was the disagreeable experience which befell our "Willie K." Vanderbilt, jr., on Thursday last.

The man who seeks leaks in a gasolene car with a lighted match or candle is full brother to the didn't-know-the-gun-was-loaded individual and that other fool, the one who rocks the boat for the fun of the thing. This increase of the fool family is regrettable, but not unexpected.



MERCEDES-SIMPLEX

Description of the Famous New German Racing Car—Many Improvements Made.

Probably no motor car ever attracted wider attention or was regarded with more interest than the new Mercedes-Simplex, the latest product of the Cannstadt works of the German Daimler company.

More or less definite accounts of these cars had preceded them, but until the date of the Nice events arrived no opportunity was presented of verifying them. Although the piece de resistance of the Nice week—the race to Abazzia—was placed under the ban by the Italian Government, the La Turbie hill climb and other events permitted those fortunate

the Autocar, among others, making a detailed examination of its constructional features.

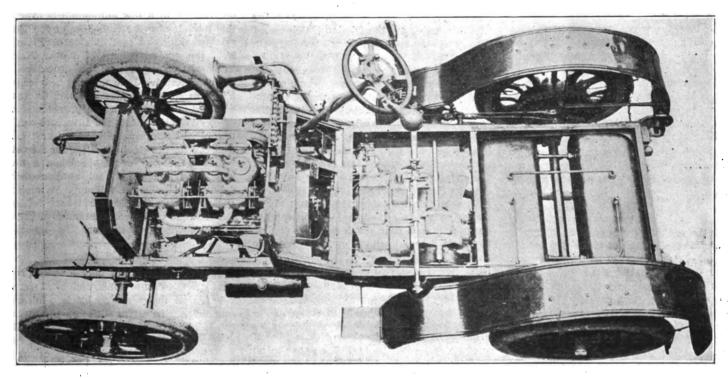
From that paper the accompany description and illustration are taken.

The wheelbase of the car is 2,450 mm. by 1,450 mm., and the wheels are 910 mm. by 90 mm., and 920 mm. by 120 mm., shod with Continental tires. The axles are of weldless steel tube, with the ends brazed and pegged on, and the steering pivots of the front wheels are inside the hubs, which are of large diameter. All four wheels run on ball bearings of liberal dimensions, the balls being 15 mm. diameter.

The plan view shows the general arrangement very clearly. The frame is of very special construction, and has evidently had very careful consideration on the part of the designer. The longitudinal members are of channel section steel, 110 mm. deep in the

and transmission gear may be lined up and fixed into position without any flexible connections or universal joints.

The crank shaft of the engine, first and second shafts of the speed gear, and the counter shaft are all in the same horizontal plane. and the underframe, such as is used on the Panhard and other similar cars, is dispensed with altogether, the crank chamber and speed gear case being furnished with carrying brackets sufficiently long to extend to the main frame. The cooler, which is fixed in a vertical position in front of the engine bonnet, is of the marine condenser type which is now well known, but improvements have been made in its construction, so that its efficiency is greatly increased. It consists of a very large number of square tubes 5 mm. by 5 mm. in section, which are grouped together, so that the space between them is



enough to be present an opportunity to examine the vehicles and get a line on their working.

The verdict rendered was almost unanimous. The Mercedes-Simplex was pronounced a big advance over the Mercedes which a year before had challenged and snatched away the supremacy of the big French makers. It was lighter, yet faster and more powerful, simple to a degree, possessing a number of undoubted improvements, and less noisy than anything yet turned out.

Among the purchasers of one of these cars—a marked characteristic of which is their almost absolute equality—was A. C. Harmsworth, the millionaire English publisher. He sent the car to England, with instructions that it should be freely shown to all who cared to inspect it, including British makers, who might be expected to learn a lot from this, the finest product of German workshops. The invitation was widely accepted,

middle and tapering to 50 mm. at the back and 35 mm. in front. They are formed by flanging a steel plate 4 mm. in thickness, and are a very fine sample of work. To avoid the use of long dumb irons in the front the frames themselves extend beyond the cooler and terminate in small forgings, which take the espring links. The engine arms form the cross pieces for the front of the frames, while at the back a channel is used, and there is another cross member immediately behind the countershaft to carry the end of the gear case.

It has been noticeable in many channel frames which have been used by motor car makers that the section has been considerably weakened by putting bolts through the flanges instead of the web, but in this case the drilling of the flanges has been studiously avoided. The frame has evidently been designed with the object of removing any possibility of deflection, even under the severe conditions of road racing, so that the engine

exceedingly small. The air is drawn through the tubes in a horizontal direction, while the cooling water occupies the interstices between them.

A large centrifugal pump, run at a moderate speed off the magneto shaft, produces circulation of the water, while a fan (the vanes of which are formed by the arms of the flywheel) draws the air through the tube. The bonnet, which is fitted between the dashboard and the cooler, has no openings, except the inspection doors, and there is a sheet of aluminum, which passes under the engine and is secured to the frame on each side. It will therefore be seen that all the air which is drawn by the flywheel must pass through the cooler. The aluminum sheet, which also serves to protect the engine from mud and dust, extends back beyond the gear case, so that the whole of the mechanism is well protected.

The engine is of the four cylinder type, but has its admission valves as well as its exhaust valves actuated. The admission valves are all on one side of the engine and the exhaust valves on the other, so that two cam shafts are required, and these are operated by spur gearing from the crankshaft. Low tension magneto ignition is used with wiping contact in the cylinder head on the admission valve side. These are operated by cams on the lay shaft below, and the time of firing may be varied by a mechanism similar to that used on the Simms engines. A single float chamber and jet supplies all the four cylinders, and the vaporizer contains a throttle valve consisting of a sliding sleeve, which is operated by the governor. The governor itself is carried in the spur wheel of the cam shaft, which operates the admission valves, and a small lever on the steering wheel is used in place of a foot accelerator. The advance ignition lever is also carried on the steering wheel.

When the car is standing and the engine throttle is right down, the latter runs at about two hundred revolutions a minute, and the sound is scarcely perceptible. For silence of running the car is certainly unique and is surprising, having regard to the high power of the engine. The throttle control is also said to be very effective in traffic, allowing the car to be driven on high gear even through towns.

The flywheel is of large diameter, and its arms, as has already been remarked, are suitably shaped to produce a powerful current of air through the cooler and engine bonnet. It is a mild steel casting, and by reason of its large diameter is comparatively light in weight. The clutch is extremely small, and it is fitted inside the boss of the flywheel. It consists of a spiral spring, one end of which is anchored to the flywheel. while the other is connected to a small lever, also carried on the flywheel boss. When this small lever is operated the spring is tightened on to a cylindrical drum, which is connected to the first shaft of the change speed gear, and there is sufficient frictional grip to drive the car. One arm of the lever 1eferred to carries a roller, which, when the clutch is disengaged, lies on the shaft, and a sliding cam pushed forward by a spring engages with it and puts the clutch into operation. This cam is withdrawn against the spring by a clutch foot pedal of the ordinary form, but when the foot is removed from the pedal it moves forward, and, having a quick rise on its face, the roller on the end of the lever runs up it on to a conical part, where the rise is more gradual. So long as there is any relative movement between the fivwheel and the first shaft of the speed gear the roller will continue to mount the cam until the clutch is sufficiently tight to drive.

Passing on to the change speed gear we find an invention which the late Gottlieb Daimler worked out in very practical form. This enables the driver to change speed without applying his foot to the clutch pedal, by automatically holding the clutch out of gear when the wheels are not fully in mesh.

The gear case is comparatively short, ow-

ing to the use of two separate sliding sleeves. each of which carries a part of spur wheels. A broad reverse pinion is moved into engagement with the low speed wheels to give the backward movement. To obtain these three separate motions there are three sliding bars in the gear case, and these are each cut in the form of a rack, which projects from the case. The teeth of the racks are well pointed, and the way shaft of the control lever carries a toothed segment, whose teeth are also well pointed on the ends, so that it may be moved into engagement with one or other of these racks. The control lever itself, besides its fore and aft movement, is also capable of being moved sideways, so as to give the necessary movement to the toothed segment on its way shaft, and this side movement also operated a sliding key, which locks one pair of racks, while the other one is being operated. A connecting link from the toothed segment operates the cam, which throws the friction clutch out of gear when the spur wheels are not fully engaged.

Ball bearings are used throughout the transmission gear—in fact everywhere except in the engine. Ample brake power is provided by expanding toggle brakes inside the sprockets, operated by a hand lever—an ordinary double action brake, lined with cast iron on the counter shaft, and a third brake on the forward end of the second shaft of the speed gear. These two latter are operated by foot pedals, and all are cooled by water, which is automatically turned on when the brakes are applied. This water is not drawn from that which cools the engine, but from a separate tank carried below the frame.

The petrol is carried in two large tanks below the frame at the back, and the lubricating oil in a small tank, also below the frame. Exhaust pressure is used to bring the petrol to the float chamber, also to bring the oil to the sight feed lubricator on the dashboard and the water to the brakes, so that in no case is there gravity feed, and the body itself is quite free from tanks of any description and can easily be detached.

Only a Racing Machine.

The new steam vehicle which G. C. Cannon, a Harvard student, has been building. made its first appearance at Charles River Park, Boston, last week. It is described as being of "24 h. p., and the strangest looking vehicle that ever made a circuit of the track. It is nothing more or less than a gigantic boiler set on a frame made of bicycle tubing. It is about 10 feet long and 3 feet wide. The steersman sits in front and the engineer behind a gigantic smokestack. After making a few circuits of the track to get accustomed to the turns, the machine reeled off a mile in 1 minute and 45 seconds. It was probably the fastest mile ever ridden on the track by a motor vehicle. The machine was designed to go 50 miles an hour on the road. and it looks as if it would be capable of doing it."

Two Men, two Flags, one Watch.

This is the way they gauge the speed of automobiles in Cleveland, Ohio:

"Two men were stationed a half mile apart on Euclid avenue on Sunday. Each had a flag. When an automobile hove in sight and passed one of the men the flag was waved. When the horseless vehicle passed the other man the other flag was waved. Marshal Stamberger was near by and timed the automobiles. As a result Paul Gaith, of No. 54 Warden street, was stopped by the marshal, and a short time later paid a fine of \$10 and costs to Police Justice Ward. The marshal claimed that he had been driving his automobile along Euclid avenue at the rate of twenty miles an hour."

To Prevent Racing.

As a result of alleged excessive speeding on the part of a few automobilists over the fine roads along the main line of the Pennsylvania Railroad just outside of Philadelphia the commissioners of Lower Marion Township have adopted an ordinance, to become operative June 1, fixing heavier penalties for speeding automobiles on the township roads. The ordinance provides a rate of speed not exceeding ten miles an hour. A fine of \$10 is prescribed for the first violation, \$25 for the second and \$50 for the third.

Under the new ordinance when a horse becomes frightened at an automobile the driver must come to a full stop. In adopting the ordinance the commissioners followed the example of the commissioners of the adjoining township of Radnor.

A Novel Condenser.

That condensers will play a more prominent part in the construction of steam vehicles as the years go by is a foregone conclusion. In Great Britain, where their use is obligatory owing to the law against visible exhaust, many novel devices have been brought out. One of these, called the Vapomobile, is an example of this.

The exhaust steam is discharged into a chest of cylindro-triangular section, from which issue on the reverse side sixty-four small curved tubes, the ends of which are introduced into the open ends of sixty-four 2ft. ¾in. 26 gauge tubes arranged in rack form, entering a deep rectangular-sectioned tank at their further ends. The area of the bores of the whole sixty-four small tubes is equal to that of the exhaust pipe. The rectangular tank is fitted midway with a removable tray carrying filtering material.

The condenser is carried lengthwise under the car, with the open ends of the tubes forward, the rear tank being set lower than the exhaust box. An entire absence of back pressure is claimed for this condenser, as the draught down the larger tubes rather induces the exhaust than checks it.

June 7 is the date set for the first ladies' run of the automobile section of the New York Athletic Club. The destination will be Travers Island, where the sixty-eighth annual athletic games of the club will be held.



The driver of an automobile should be a person of horseless sense.

Some philanthropic souls are planning a home for aged horses; good idea! You'll never have to provide anything of this kind for the automobile. No indeed! The superannuated automobile just simply vanishes into thin air like the elusive hairpin or the defunct mule!

When a man goes out to purchase automobile experience he is never long in discovering that there are more foolish purchasers of motor vehicles than foolish sellers thereof. Think that over and I know you'll agree with me, no matter whether you have been a purchaser or a seller,

+ + +

If it is a poor rule which refuses to work both ways, then it must be a good one which will work either way. Judged by such logic then the rule that good roads beget good vehicles is a mighty good rule, because when you seek to work it the other way you are not long in discovering that it is equally as true that good vehicles beget good roads.

. . .

Lost: A fine iron-bound, copper-riveted, airtight, Long Island made "misdemeanor"; last seen buried under fifty feet of Recorder Goff's decision, that the "misdemeanor" could not be used by city magistrates for the purpose of fining such automobile users as the police for any or no cause might see fit to arrest. No reward will be paid for its return, because it is not worth a cent.

. . .

If it ever ensues that the alcohol motor is really a success I don't mind telling you that about that time there'll be the biggest boom in "made in Germany" vehicles you ever dreamed of. Imagine a French, an Irish, or even an American chock full of alcohol, then compare him with the sedate, noncombative German in a like condition, and you'll understand why the public will prefer to trust itself to the German motor rather than to the other alcoholics I have named.

. . .

The wagon tongue says never a word, yet it invariably gets there ahead of the remainder of the outfit, just the same. Perhaps some people who drive wagons and while doing so take occasion in language not over refined to pass opinions upon the automobile, its users, their future and so forth, might make a note of this wagon tongue fact to the advantage of themselves and of other users of the highways as well. This is merely a suggestion, and you know how much value a suggestion which is not driven into his anatomy with a strong arm has with a truck driver.

At last the British automobilist has got friends at court who will do a lot to overcome the unreasoning prejudice on the part of the ordinary people, which he has heretofore experienced. King Edward not only uses an automobile whenever he can, but has actually created a court official whose sole duty it is to see that the King's car is in fit condition to finish well up in the hour's mileage record. I wouldn't like to be the man though who would try to induce the ruler of this country to follow the example set by England's King. Imagine the kind of a reception President Roosevelt would give to any suggestion that he substitute a Can-

stat for a cayuse!

Life from beginning to end is a readaptation. What is good to-day may be bad tomorrow. Conditions change and methods must change with them. The means and media by which success could be obtained in automobilism a few years ago are to-day obsolete and worthless. The manufacturer. therefore, who is not capable of growing and expanding, of noting and pressing into his service the new elements and forces that arise, will never secure that measure of success which will warrant his staying in the automobile business. The pace is swift, because the prize is great; slow coaches will therefore never successfully compete with automobiles either in the trade or out of it.

. . .

Seems queer we never learn from other people's experiences, don't it? Take the guarantee ripsaw for example. See what a hole the guarantee cut into the bicycle trade and yet despite that we are now going to attach it to the already well burdened automobile. For the life of me I can't see why a man purchasing an automobile should be given a guarantee any more than when he buys any other kind of carriage. There's only one kind of guarantee which is worth paying for, and that is neither a matter of words nor of formula. When you buy anything from Tiffany, for example, what guarantee do you get? Nothing but the guarantee which ever goes with the name and reputation of a great merchant; that is all, and it is enough. So it should be in the automobile trade. The guarantee of a vehicle should be the reputation of its maker, nothing more, nothing less.

Any attempt to make of a guarantee something which applies alike to the vehicles built by the cheap Johns of the industry and the ones put forth by the leaders thereof, deserves to fail, and will do so. The man who builds the best vehicle he knows how to build, who puts into it intelligently honest material and labor, will always find purchasers for his vehicles without any other guarantee than his reputation for good workmanship. The man who does not build well, nor construct in a thorough fashion, will only employ any guarantee that might be devised as a thing to be used solely for his benefit and the purchaser's detriment. It is the old trade story of the "just as goods" over again, in which the incompetents have everything to gain with nothing to lose, while the reputable makers have everything to lose and nothing to gain. The guaranteeing of automobiles is a good thing for good people to leave severely alone, and when I write this I know exactly what I'm writing about, too.

Going to have a 50 mile automobile highway down Long Island, eh? Daily papers say we are, so it must be so; still I'm willing to risk the price of a pint of peanuts on a wager that there isn't going to be any such a highway, not while any one of us is alive. There is nothing so easy as to plan "improvements" of this kind, on paper, but when you attempt to transform your paper plans into actual facts then you run up against so many kinds of objections on the part of the rest of the world that you are quickly convinced that planning is preferable to performing. In the announcements of this Long Island hurry heaven you will notice that the announcers are very vague as to who is to pay for it, and how the right of way is to be acquired. To secure any such thing for a railroad is almost impossible owing to the legal and other difficulties involved. How much more difficult then do you think it would be to secure this right over on Long Island, where an automobile and a native are not quite as friendly as they might be? Assuming the impossible, however, and the road is built. The rural taxpayer sees the automobilist going on his way over his own road free from all petty annoyance and bucolic blackmail, what will he do? Sit still and see "them city fellers" enjoy themselves? not much! He'll go to Albany and pass a law prohibiting any road from being set apart for any vehicles not drawn by horses, or in some other equally unfair way rob the men who were foolish enough to think that they might in some way escape the rural voter and his legislative servants.

Even if everything went right, and the road was built, and the enthusiastic support of every Long Island man, woman, child and farm animal was accorded it, still would it be an injury to the automobile. Once the owners of the new vehicle had, by building a road of their own, virtually confessed by doing so that the motor vehicle needed some especial kind of road to make the use of it safe for the public as well as for its owners, than a no insignificant portion of that same public would proceed to demand that the automobile be confined to just such private roads as its supporters and users might pay for out of their own pockets. As I said in the beginning there isn't a ghost of a chance of any such road being built on Long Island, or anywhere else, and this only makes all talk about the thing all the more foolish, particularly just at this time when the automobile has about trouble enough and a plenty without any such impracticable schemes as this Long Island one being exploited for the purpose of adding to the aforementioned enough.

THE COMMENTATOR.



ONLY AN INFANT

is the Gas Engine—Even Steam is Antique Compared to it.

It requires some effort to remember that the modern steam engine is but little more than a century old. Steam itself was known before the present era, but the ancients never made any practical use of it; or, if they did, it was at a very early period and the process soon became one of the lost arts.

Nevertheless, in this small space of time steam has become universally familiar, and its possibilities are almost exhausted. Everybody knows something about steam, and an enormous number of people know how to handle it.

The how on the farm has seen the threshing engine and heard engine talk ever since he can remember. Every sawmill and grist mill has been an educational centre for its community of boys and men. The locomotives, running through the country in all directions, have carried the fever, so that a great many boys have been studying and planning for the time when they could have an opportunity to run one. These things have been going on ever since the steam engine became familiar as a power producer, and now it is hard to find a community where there is not some one who understands the conditions necessary to have an engine run; not always under the best conditions for efficiency, perhaps, but still run and do its work.

BIG WITH FUTURE IMPORTANCE.

But the gas engine derives its chief importance from the future. Scarcely a day goes by that some progress is not made in its development, in its march toward approximate perfection. But much as has already been done, it is but a tithe of what there is to do. To the great mass of the community the gas engine is new, and with this newness there is linked a distrust that is not wholly unnatural, no matter how ill founded it may be. Gas and gasolene are not particularly sweet smelling names, and it will be some time before the prejudice which undoubtedly exists toward them is outlived.

One thing that hinders the rapid advancement of the gas engine, says a close student of the latter, is the lack of available, practical knowledge of its principles, viewed as a working machine, and from an engineer's standpoint.

Furthermore, while the gas engine, as a machine, is far simpler and easier to manage than a steam engine (including the boiler), there is one thing that should be distinctly borne in mind, and that is, that while the conditions under which a gas engine will run are thus simpler, they are also more imperative.

To explain this meaning by an illustration: To start a steam engine, the boiler must have its proper supply of water, the fire must be built, steam raised, the engine crank must be put in proper position, the cylinder cocks opened and the steam turned on. The last act does not call for any nicety of manipulation. More or less steam, so that there is enough to start, only means faster or slower motion, and not a failure of the whole attempt.

WHEN THE HOT TUBE IS USED.

With a gas engine, if it uses a tube ignition, the gas is lighted to heat it, the engine is set in position to draw in its first charge, the valve or valves are opened to admit the charge, the motions necessary to draw in and then to fire the charge are gone through, and the engine starts. To have the engine start, though, requires close attention to some apparently simple things.

The tube must be hot enough. The engine must be set right to have the functions come in their proper order. The right amount of gas and air must be turned on, and a certain amount of energy must be imparted to the wheels. A failure in any one of these means a failure to start.

Any man that is doing work on the road in the gas engine business-it matters not for what make or style of engine he is travelling-will tell you that much oftener, in case of trouble, it will be found to be due to non-compliance with one of these conditions, rather than to any defect in the engine. He will also likely tell you the third particular is the one that most frequently gives trouble; that is, not getting the gas and air turned on in the proper proportions; and nearly always the gas is in excess. The reason for this is not far to seek. With steam, "the more steam, the more work," therefore with a gas engine, "the more gas, the more work," instead of "the more mixture, the more work," which is true of a proper mixture.

AIR AS ESSENTIAL AS GAS.

It is safe to say that a lack of proper understanding of this one point has given more trouble to gas engine users than all other causes combined, except actual neglect.

It cannot be too constantly borne in mind that gas engines, so called, are gas and air engines, and that the air is just as essential to their operation as the gas; and also that more gas does not mean more power, but often much less. Air is cheaper than gas, and it pays to use all of it that the gas needs; better have a surplus of air than a surplus of gas, better for the engine and better for the pocketbook. If a man gets the idea firmly fixed in his mind that to run a gas engine, he must get the charge in, keep it in and explode it, and that the charge must be of a proper proportion, he need have very little trouble, outside of actual breakage, in running an engine.

Some judgment in setting is necessary to get the mixture right, and if a man does not clearly understand why he is trying, it is not as readily done as if he does. Gas, being always under some pressure, comes in whenever a valve is opened, the air only

when there is some diminution of pressure within. The slower an engine is turned the less gas should be turned on, as it has more time to get in and crowd but all; v.

The lighter the atmosphere the less gas should be turned on, as it has less pressure to help it in getting in; and more important still is it to remember that if not enough gas is turned on, repeatedly trying to start tends to correct this, and finally enough will be gotten in; but if too much is turned on, increasing effort only makes the matter worse, and the engine cannot start until this surplus gas is gotten rid of. This can be easily done by shutting off the gas and turning the engine as in starting, thus pumping out the surplus gas. Caution should be used, as when enough has been gotten out, the charge will explode. When this happens the engine is ready to make a fresh start.

THINK WITH THE EYES OPEN.

Any one that can do a little thinking, that can keep his eyes open, and who is careful, can run a gas engine. In the hands of a careless man it is safer to have in a neighborhood than a steam boller is, but it will refuse to run for trifles that a steam engine wouldn't mind, and to run its best it must be humored in its peculiarities. "Like causes producing like effects," it is clear proof that the causes are not alike if the effects are different.

Wants Damages From Thomas.

An echo of a very lamentable occurrence was heard last week when there was brought to trial before Judge Freedman and a jury in the Supreme Court, this city, the action begun by Frank H. Thies, as administrator of his son Henry, seven years of age, to recover \$25,000 damages from Edward R. Thomas for the lad's death, which occurred last Lincoln's Birthday, at 130th street, when the boy was killed by the young millionaire's automobile, the White Ghost, which formerly belonged to W. K. Vanderbilt, Jr.

Several witnesses were examined who testified to the accident. Miss A. Hansen, who saw the boy struck by the automobile, testified that the machine was going along like an express train, and that the little fellow was running for the sidewalk at the time he was struck. Other evidence was to the effect that some boys were playing when the automobile came along, and that as the lad was endeavoring to reach the sidewalk the automobile swerved to the east and struck him before he could get out of the way.

The trial will be continued.

To Philadelphia in Four Hours,

An exceedingly fast trip between New York and Philadelphia is reported to have been made last week by W. T. Rainey. The distance—100 miles of good and bad roads in about equal proportions—is said to have been covered in 4 hours and 8 minutes, considerably under the best previous time, 4 hours and 42 minutes, said to have been made by W. K. Vanderbilt, Jr.

TURNTABLE'S ADVANTAGES

Owner Tells of them and Describes the Building of it—Cost is Small.

In the cramped confines of the usual private automobile house or stable one of the greatest afficulties encountered is the turning of the vehicle. It must be backed in or backed out, and neither process is an agreable one. The average user finds it the lesser of the two evils to run the vehicle out by hand, turn it around and head it in the desired direction.

How one automobilist grappled with the problem and solved it in an entirely satisfactory as well as surprisingly simple way is best told in his own words.

"I have thought that the readers of the Motor World would be interested in an improvement for an automobile house," writes for play in turning. Sixteen large ball bearing castors, let into the bottom of the table 13½ inches from the outer edge, were used. These run on an iron track 3 inches wide, ½ inch thick, laid on the floor of the pit. 1 made a centre pin with a steel ball 1½ inches in diameter, set in two plates of Babbitt metal ½ inch thick, run on two steel washers 4 inches in diameter. Three holes were bored for the metal to get a grip on the washers, and then holes for screws.

"All the castors were packed in Albany grease, covered with leather except where a small hole let the ball protrude, and tacked all around, thus preventing rust and giving constant lubrication.

"The Foster surrey, with water and gasolene, weighs about 1,300 pounds, and for a heavier machine I think the table should be made of three thicknesses of 1¼-inch spruce, with castors set every 15 inches.

"Back of the turntable under the floor I

EXPLOSIVES COMPARED

Gases are the Most Suitable for Motors — Are More Easily Handled.

The nature of an explosion in a gas engine was treated in an interesting manner in a paper read before the Institution of Engineers and Shipbuilders in Scotland recently.

"The explosion in a gas engine cylinder is different from that produced by gunpowder, cordite, or other solid explosives," said the speaker; "here a chemical change is effected whereby a solid or semi-solid evolves large volumes of gas, the gas when cooled being hundreds of times the volume of the original solid powder; also great heat is produced by the chemical action, and so very high pressures are obtained. But such explosives are quite unsuitable for obtaining controllable



HANDLED ON A TURNTABLE.

Dr. M. A. Carman, 2 Wall street, New York, "In building a house for our automobile I adopted a device suggested by a friend, viz., a turntable, and now find it a great convenience.

"There should be one in every automobile house and barn, as it saves room, enables one to drive right on the turntable, and, after alighting, reverse the carriage by grasping the springs at either end and pushing it around a half turn. Then the carriage can be backed to any part of the room, ready for a straightaway start. The inclosed photograph explains itself.

"The dimensions are as follows: Diameter of table, 9 feet 6 inches, made of two thicknesses of 1¼-inch matched spruce, laid one across the other, thoroughly nailed together; depth of pit for table, 3½ inches; a floor of 1¼-inch matched spruce is laid in the bottom of this pit; the floor beams for this were drepped 4¾ inches below the others of the regular floor.

"Have half an inch space around the table

have a pit dug 3 by 4 feet and 4 feet deep, with a trap door; thus there is no more lying on your back to get at the working parts of your motors.

"The cost of the table complete was \$35."

In Pamphlet Form.

In The Motor World of April 12 there was published a very complete description of the operation of the "Chloride" and "Exide" Accumulator in the service of the New-York Transportation Co. This article has attracted so much attention that the Electric Storage Battery Co. of Philadelphia, manufacturer of these batteries, has reprinted it in the form of one of their standard bulletins, and will be pleased to forward a copy to any one interested in the subject.

Henry Ford is reported to be engaged in building a racing car for Tom Cooper, the well known bicycle racer. Mr. Ford is no longer connected with Henry Ford Co. motive power, and attempts made to actuate engines by gunpowder and guncotton have all been failures.

"A gaseous explosion is much more controllable and its action is simpler. There is no change of state during the reaction from solid to gas; on the contrary, in all ordinary gaseous explosions the volume of the gases formed by combustion, reduced to standard temperature and pressure, is less than their ordinary volume before combustion. In the gaseous explosion, the increase of pressure is due wholly to the increase of temperature of the gases entering into the chemical action."

Here's News.

The New York Motoring Club admits femininity to full and generous membership. In its new and decorative clubhouse a special reception room for the sole use of lady members has been most sumptuously furnished and fitted.

So, at least, Motoring Illustrated asserts.



WANT VIGILENCE COMMITTEE

To Protect Horsemen and Farmers From Auto-, mobilists—Some Terrible Examples.

To run with the hare and hunt with the hounds is an ancient dodge, but it is not often that a better example of the practice is found than that in the Herald of Sunday last.

As is well known, that paper has been manifesting a great, almost an extraordinary, interest in automobiles. It has featured and favored them consistently, publishing a great deal of news and much that is not news concerning them. But it has another string to its bow, to wit, the horsemen. These gentlemen are valuable advertisers, their patronage being worth many times as much as that of automobilists; consequently they are treated generously and patted on the back whenever it seems necessary.

Such an occasion arose the other day, when a correspondent addressed the Herald as follows:

"On behalf of an outraged public, I venture to ask your powerful aid in curbing the reckless automobilists who are running riot throughout the land.

"Another week in the carnival of death and destruction which follows in the wake or the murderous automobiles has passed. The people suffer and have not yet risen to suppress these lawless, goggled, overbearing, insolent brutes who crouch over their machines, tooting horns, and rush on supremely indifferent, spreading death and ruin in their wake, scarcely even stopping to help their wounded or dying victims.

"Is it possible for this state of things to continue—that our lives and those of our women and children must be sacrificed to enable a handful of millionaires to enjoy the sport of 'butchering us to make an automo-

bile's holiday?'

"An appeal to the courts is worse than useless. The trivial fines inflicted are paid with a sneer, and the automobilist mounts his car, rushing off in triumph. As yet no magistrate has dared to enforce the law by imprisoning one of these offenders.

"While the speeding of automobiles is a great danger in cities, the danger is much greater on country roads, where there is nothing to distract the horses' attention from

them.

"On Long Island a reign of rage and terror exists. Farmers, trying to earn a living by carting produce to market, are upset in the ditches, their wagons destroyed and their horses ruined, while their women and children are terrorized and dare not use the

highways.
"I am not exaggerating the situation, and I know that a conviction is growing that the only resource (in the absence of the enforcement of the law) is in the shotgun."

This gentle admonisher is applauded, and the suggestion made that he is a fit person to head a movement against automobiles. Says the Herald:

"Recent events have convinced a great many pleasure drivers that a horse owners' protective association or a vigilance committee is needed in New York to put a stop to the increasing outrages committed by men who operate motor cars on the public highways. Matters have reached a pass where it is not safe to drive a horse or even to walk the streets about New York, owing to the recklessness with which the machines are operated.

"The few automobilists are well organized, and all that money and influence can do in preventing the enactment and enforcement of adequate restraining measures is being done, while the great mass of the people who ride, drive and walk have up to this time let them run riot almost unopposed.

"There is a widespread feeling, which needs only a leader to convert into action, that those whose rights are being violated should get together in an organization big enough and broad enough to include everybody and squelch the little band of offenders. Such an association would have the moral support of the whole community, and could accomplish more in thirty days than will ever be accomplished without organization to bring the insolent offenders up with a sharp turn. The indignant horseman, genial gentleman and representative citizen who wrote the above letter would be the right man to head the movement."

A Full Load.

Even a motor car having a tonneau body, and therefore supposed to be of elastic capacity, is not generally expected to carry a baker's dozen passengers. The Mors car shown, however, did that, and one more was thrown in for good measure. Twelve men



are to be counted, and there are said to be two more "out of sight." With this cargo the car was sent up a good hill, stopped on it, photographed and then made to resume its journey, all of which was done without a skip.

Successful on Short Notice.

Although gotten up at short notice, 24 vehicles took part in the Sunday run of the New York Athletic Club to Travers Island. The route was through Central Park, up Lenox avenue, across Macomb's Dam Bridge and thence to Travers Island, by way of Pelham avenue. The caravan reached the country club at noon. After luncheon the automobilists returned to the city in small contingents, after visiting Larchmont, Yonkers and other places in the neighborhood.

To Middletown for Luncheon.

The second run of the Automobile Club of Hartford, Conn., which took place on Saturday afternoon, was participated in by about a dozen vehicles. Middletown, sixteen miles away, was the destination, and the start was made at 2:30. After a lunch at Middletown the party returned to Hartford, reaching there before 6 o'clock.

UNDER REAL CONDITIONS

Department Store Uses Delivery Wagon for one Month—Detailed Figures.

Reference was made a few weeks ago to the plan inaugurated by the Daimler Mfg. Co., Long Island City, N. Y., of placing at the disposal of prospective purchasers a delivery wagon to be operated just as it would be if it formed a part of the concern's delivery system. It is sent out loaded with merchandise, and makes deliveries in the regulation manner, returning for a fresh load when its route has been covered and the good delivered. It is thus made plain just what the vehicle can do and what its operating cost really is.

One of the Daimler Co.'s wagons was last month subjected to a test or demonstration of this sort by a big department store in this city. The result was most satisfactory. The concern informs the Daimler Co. that the vehicle did the work of six horses and two wagons. They further state that, after making fiberal provision for fuel, storage, maintenance and wages of the operator and a boy, there is a saving over their present system of \$216 a month.

A detailed account of the wagon's work during the month is both interesting and eyeopening. It is as follows:

			Gasolene				
	Time	Time re-		con-	Odomʻ		
	left.	turned.		umption,			
Date.	A. M.	P. M.	Stops.	gallons.			
3.31.02	8.00	3.00	13	3	32		
4. 1.02	8.00	4.25	19	31/2	36		
2.	8.30	5.20	36	4	40		
3.	8.15	4.00	33	41/2	40		
4.	8.15	4.00	28	41/2	42		
5.	8.15	5.20	51	51/4	50		
	8.30	3.15	18	5	50		
8.	8.30	5.15	30	6	65		
	8.15	5.45	24	51/2	65		
10.	8.00	5.45	37	71/2	75		
11.	8.30	6.30	. 66	8	77		
12.	8.30	9.30*	26	4	40		
	8.30	6.00	47	61/2	70		
15.	8.30	6.00	72	61/2	70		
	8.30	6.00	32	51/2	58		
17.	8.15	5.30	53	5	49		
18.	8.20	5.45	54	51/2	52		
19.	8.00	5.00	40	61/2	64		
· 21.	8.30	6.30	38	7	71		
22.	8.10	5.50	46	6	59		
23.	8.30	6.00	50	61/2	62		
	8.00	6.00	56	5 1/2	60		
25.	8.00	5.30	34	51/2	60		
26.	8.30	5.4 5	41	5	5 5		
28.	8.45	5.00	69	41/2	40		
29.	8.30	6.00	102	41/2	41		
30.	8.30	5.45	82	41/2	40		
Totals				1451/4	1,463		

^{*}Delayed through hot box.

The route was sometimes through lower Westchester County and at others in Harlem.

Local automobilists are talking of holding several race meets during the summer at Cumberland Park, Nashville, Tenn.



A LAND GONDOLA

How an Irish Automobilist Designed His Car— Some of its Advantages.

Conventional designing has been markedly departed from in an electric motor car built for an Irish automobilist, of which the illustration will give a good idea. The vehicle bears a strong resemblance to a gondola, but in spite of this likeness to the aquatic method of transport so popular in Venice it is intended to be run only on the land.

The chief objects aimed at in the production of this car are a low centre of gravity, long wheel base, protection of the mechanism and elegance in appearance. The first is obtained by using wheels of smaller diameter and a specially constructed frame. The second is simply a lengthening of the frame

type cells. There are two speeds, controlled by magnetic clutches. These are increased to four, as each of the two speeds is capable of being run at a high or low speed. These speeds are actuated by a controller, which connects up the cells in parallels or series, according to the rate of speed desired. The motor when running at its highest speed develops about 7 horsepower for a short time.

The steering wheels are mounted in forks similar to those on an ordinary bicycle, and are, of course, coupled together. They are controlled by a vertical steering wheel, after the manner of the old fashioned ship-steering gear.

Favors the Owner.

It has been decided by a French court that an automobile owner driven by a chauffeur is not liable for damage to person or property caused by a collision or accident unless

THOMPSON ON NERVES

Says Motoring is Good for Them—Delivers Himself on Absurd Speed Laws.

Although eighty years of age, and therefore pardonable if he had chosen to hold to old fogy ideas, Sir Henry Thompson, the eminent English surgeon, is an ardent automobilist.

Nor does he confine himself to the use of the motor vehicle. He has written a book on the subject, "Motor Cars and Health," in which he preaches the gospel of automobilism in no uncertain tones. He addresses himself particularly to people with nerves. To them he says:

"The exhilaration which accompanies driving in a motor is particularly helpful to people who are somewhat enervated. I have known instances of ladies suffering from de-



A GONDOLA CAR.

work, provided this is built sufficiently strong to be rigid between the wheel centres. The third item—that of protection from dirt and dust, both for passengers and mechanism—is perhaps the most important of all from the average motorist's point of view.

It will be seen from the illustration that the top half of the wheels are covered in by the body of the car, and therefore no mud or dirt can possibly be thrown up and over the car or its passengers. The wheels will, of course, throw up a certain amount of dirt, but suitable provisions are made for catching this and disposing of it. In cleansing and general upkeep the car will need a minimum of attention, for as the dirt thrown up by the vehicle itself is confined there is not a lot of careful washing and cleaning necessary, as with other types of cars.

The motive power is derived from a 4½ horsepower electric motor, the current for which is obtained from forty-two Fulman

he materially assists in conducting the vehicle. The civil court at Beauvais recently declared the owner liable under such circumstances, but the Amiens appeal court reversed the judgment this week. The decision states that there must be clumsiness, inattention or neglect of regulations proved on the part of the proprietor personally, otherwise the driver alone is liable to a penalty.

England's Electric Trials.

July 7 to 12 are the dates selected by the Automobile Club of Great Britain for its trials of electric vehicles. The trials will last five days, and cars may be entered in any of the following classes: 1, town carriages; 2, country carriages weighing over 30 cwts., including accumulators! 3, country carriages weighing under 30 cwts., including accumulators.

fective nerve power who have derived great benefit from the invigorating and refreshing effect of meeting a current of air caused by driving in an automobile.

"Veils of varying thickness, according to the temperature, should, of course, be worn by ladies; but much of the benefit to nervous patients is caused by the air blowing on the face. The facial nerves are acted upon with beneficial results, well known to have a restorative influence on weak and so-called nervous individuals. Furthermore, the action of the air on the face and the continual inspiration of fresh air tend to promote sleep, and I should have no hesitation, speaking generally, in regarding daily exercise in a motor car as aiding toward the prevention of insomnia."

Being a sensible man, Sir Henry does not fail to take a shot at the too prevalent tendency to harass automobilism with century-old speed laws. He describes the British



speed limit of twelve miles an hour as ridiculous, and regards twenty miles an hour as quite feasible on a good country road.

In this connection he pays a tribute to the zeal of the policeman, but tempers his praise with some "quite confidential" advice to the automobilist who may be charged with furious driving. For example, in certain circumstances such a charge rests upon the calculation resulting from the employment of the stopwatch; and this is how Sir Henry Thompson would have you cross-examine the policeman in court:

"Reply politely that you desire to know the name of the watchmaker, and will they be good enough to produce the watch? On their doing so, you will find it is not made by an English maker, but that it is a cheap foreign watch; if so, it is wholly untrustworthy for racing purposes, such a one never being employed to determine the speed of a man, a horse, an automobile or even of a cycle race. The police have no others, for the stopwatches which are alone depended upon for any of the above named purposes have been made by makers of repute, and are far too costly to supply to the police force."

Not Likely to Resume.

There is very little probability that the Milwaukee Automobile Co., which last week went into the hands of a receiver, will continue business. The receiver, the Wisconsin Fidelity Trust and Safe Deposit Co., will work up the stock in hand, but beyond that it is not likely that anything will be done.

Howard Van Wyck, the attorney for the automobile company, said that the principal cause of the bankruptcy proceeding was lack of capital to run the extensive operations of the company.

"A large number of automobiles were manufactured during the winter," said he, "and of late the market for them has not been so good as was expected. It became impossible to meet obligations as the bills were presented, and it was decided that the only course to pursue was to go into bankruptcy. The liabilities, both secured and unsecured, aggregate about \$45,000 or \$46,000, I think, and the assets are as much or more, probably close to \$50,000. The principal unsecured creditors are Eastern firms who have supplied material."

The receiver is permitted to continue the operation of the factory for the purpose of finishing the contract work and the automobiles under way. The assets consist of machinery worth \$3,000, unfinished material worth \$22,000 and equities in thirty-three unfinished automobiles. Their unfinished contracts, it is said, represent a net value to the creditors of \$4,000.

An automobile 'bus line is projected to run between the village of Rhinebeck and the railroad station at Rhinecliffe, a distance of 2½ miles. Former Vice-President L. P. Morton and Col. J. J. Astor, whose country seats are in the vicinity, are leading spirits in the venture.



Manila has a club, the Manila Automobile Ciub.

The Whipple Cycle Co., Chicago have undertaken the sale of the Oldsmobile.

An automobile 'bus line may be established between Poughkeepsie and Millbrook, N. Y.

There is talk of running an automobile 'bus line between Durango and Farmington, N. M.

V. C. Rands, of Detroit, has purchased, presumably for his partner, Steve Hartwell, Henry Ford's racer which made the Grosse Point record of 1:12 from standing start.

One hundred dollars per day is the price reported to be paid for the rental of a big French vehicle which a New Yorker has secured for a foreign tour lasting several months.

Complaint is being made of fast driving by Hartford, Conn., automobilists. The offenders are said to number but a few users of the motor vehicle, the great majority of them frowning on indiscriminate speeding.

The Automobile Club of Bridgeport, Conn., has decided not to join the American Automobile Association for the present. An invitation to do so was laid on the table, the conditions of membership being considered too exacting.

One of the largest owners of automobiles in the world is A. C. Harmsworth, proprietor of the London Daily Mail. His "stud" includes some half dozen examples of British make, four of French manufacture, two of American and one of German.

In a race from Denver to Colorado Springs and return, 154 miles, last week, W. B. Felker defeated Webb Jay by an hour and a half. The actual running time was 6 hours and 56 minutes, an average of about 22 miles an hour. The roads are described as being abominable.

Ex-President Jonathan Godfrey of the Automobile Club of Bridgeport, Conn., has decided to offer a handsome silver cup as a prize for an endurance run to be held some time during the season. It was voted to hold the run and that it be in charge of the runs and tours committee.

In the United States Court at Trenton, N. J., last week, Judge Kirkpatrick filed an opinion in the case of the Hartford Rubber Works Co. against the Consolidated Rubber Tire Co., and made an order giving judgment on demurrer to the defendant and dismissing the bill of complaint,

The Studebaker Bros. Mfg. Co., of South Bend, Ind., are putting through 200 electric vehicles, but as they are buying the running gears complete, and are using the Westinghouse motor, they can only be said to be really building the bodies and attaching the motors to the running gears.

It now looks as if the talked of race meet at Narragansett Park, Providence, R. I., on Decoration Day would not be held. Some of those who were expected to take part in it regard the date as too early, having had insufficient time to become thoroughly acquainted with their new vehicles.

On Saturday afternoon the Automobile Club of America will run to Babylon and Garden City, starting from the clubhouse at 2 p.m. At the latter place a dinner will be given at 6:30 p.m., and the clubroom which has been secured for the exclusive use of the members will be formally opened.

An ordinance is to be introduced in the Detroit, Mich., City Council providing for the payment of a license fee of \$5, in addition to which the owner will be required to carry on the vehicle a plate indicating that he had deposited his money with the police department in compliance with the law.

One of the surest ways of getting maximum power is to have an electric ignition which gives a fat spark. A cheap or small installation will generally mean weak current, and hence inefficient ignition. There should be ample battery power, a coil of first-class make, and the fittings laid in carefully.

At the annual meeting of the Automobile Club of Bridgeport, held last week, the following officers were elected to serve for the ensuing year: President, Dr. C. C. Godfrey; vice-president, Arthur K. L. Watson; secretary, F. W. Bolande; treasurer, Jesse B. Cornwall; consulting engineer, J. N. Bulkley; board of governors, Jonathan Godfrey, Louis Cassier, George W. Hills and W. S. Teel, Jr.

H. B. Shattuck & Co., Boston, Mass., have leased the ground floor of the building formerly occupied by the New England Electric Vehicle Co., and will open a storage and repair station. It will have a storing capacity for about 200 vehicles, and is strictly fireproof throughout. The retail store, on Columbus avenue, will be continued as heretofore.

The newly organized Automobile Club of St. Louis has elected the following officers: G. H. Walker, president; Dr. Jules F. Valle, vice-president; Edwin Mallinckrodt, Jr., treasurer; Dr. E. M. Senseney, secretary; Board of Governors, Horace Rusey, George B. Leighton, A. W. Niedringhaus, John Ring, Jr., and John Carter.

TO SIFT THEM

Telling the Good Chauffeurs From the Bad— As Done in Great Britain.

Too frequently an automobile cap, a little motor jargon and a pair of greasy hands have enabled men to pass themselves off as chauffeurs. When it came to the pinch it was often found that what they did not know about motor vehicles was a much larger mass than what they did know.

With the purpose of grappling with this evil the Automobile Club of Great Britain is establishing a motor servants' register.

The committee having the matter in charge are determined that no driver who is incapable shall succeed in getting on the register, and they have drawn up a form of application that demands answers to these very crucial questions:

- (a) Name of applicant.
- (b) Address.
- (c) Age.
- (d) Appearance, height and weight.
- (e) Nationality.
- (f) Languages spoken.
- (g) Married or single (if the former, what family?)
- (h) Is the applicant willing to be engaged in London or in the country, or both?
- (i) Is he willing to live in his employer's house or out?
- (j) What wages and allowance does the applicant ask?
 - (k) Will he wear livery?
- (l) Will the applicant undertake the daily washing of a car and other duties? 1. Indoor; 2. Outdoor; 3. Mechanical duties.
- (m) Does the applicant claim to be (1) a driver, (2) a driver who can do ordinary roadside repairs, (3) or a driver and thorough mechanic?
- (n) Nature and duration of training in engineer's works. Name and nature of such works?
- (o) What was the applicant's former employment previous to his connection with motor cars?
- (p) How and when was the applicant first connected with motor cars?
- (q) Description of the car with which the applicant is most conversant—(1) horsepower, (2) maker, (3) date of manufacture, (4) ignition (tube, electric, De Dion, Benz, magneto or other system), (5) tires (pneumatic or otherwise)?
- (r) Time during which the applicant has been serving with such car?
- (s) Name and address of owner of such car.
- (t) Other cars with which the applicant has served. ...

Professional chauffeurs who are competent will not object to answering these questions, but, on the contrary, will be proud to describe their qualifications.

Incompetent chauffeurs will feel highly in-

sulted at this cross examination, but what they feel is not of the slightest consequence to any one but themselves.

Has a Top and Inside Lever.

In addition to their Columbia Runabout, Mark XXXI, as shown in their catalogue, the Electric Vehicle Co. will hereafter supply this vehicle equipped with a full buggy top and with the controlling lever on the inside. The addition of the top adapts the vehicle



to comfortable use at all times, and will make it available for physicians and others whose requirements call for regular service without regard to weather conditions.

Low Went Under.

Speed limits were suspended for the time being when, on Saturday, Mayor Low was whisked from Flatbush to Coney Island and Bay Ridge and back again—not to forget a subterranean trip through a sewer. The Mayor has a decided liking for getting a good turn of speed out of his vehicle, and on this occasion he kept in front, although the speed is said to have reached twenty-five miles an hour, as against eight miles, the legal rate. Nevertheless, no arrests were made.

It was a tour of inspection of the southern section of Brooklyn, arranged by Borough President Swanstrom.

As a unique feature of the trip the Mayor and the other officials were taken down into the great Bay Rridge sewer, that runs eighty feet under the level of Sixty-fourth street, to New York Bay, and will, when completed, drain the entire section of Brooklyn Borough south of Prospect Park. The Mayor's party entered the sewer at two points, one at Fourth avenue and Sixty-fourth street, where entrance was made by means of an elevator that ran down to the sewer level, and one at Second avenue and Sixty-fourth street, where the Mayor and the other city officials climbed down a long ladder, and, when they got into the sewer, were driven one thousand feet bayward in automobiles that awaited their coming.

On each of these visits to subterranean Brooklyn the Mayor posed for and had his photograph taken.

It is rumored that the Baldwin Automobile Works, which were recently sold at auction, will be removed from Connellsville, Pa., to Morgantown, W. Va.

SCHWAB'S WAY

Goes to Vienna for a Trial Trip—His two Motor Vehicle Purchases.

Mr. Schwab, the steel millionaire, says a French correspondent, has all the sang froid of his race. The other day he was in Nice, talking in badly broken French to an enthusiastic Gallic motorman whom he had casually met a day or two before.

"An interesting machine, the automobile," remarked Mr. Schwab.

"Tres interessante," answered the Frenchman

"How much did that one cost you?" went on the millionaire, pointing to the "whizzer" that stood at the edge of the pavement.

"Sixty thousand francs."

- "Will you sell it? Because, if so, I'll buy.
- "Willingly."
- "All right! You have another one?"
- "Yes."
- "How much?"
- "Fifty thousand francs."
- "Will you sell that also?"
- "With pleasure."
- "I'll take it, then."

Having concluded the bargains, Mr. Schwab calmly puffed a cigarette for a few minutes; then a thought seemed to strike him. "I've never been in one of the darned things yet. I shall want a driver," he said, turning to the motorman.

"Well, I cannot sell you one of those," replied the Frenchman, laughing, "but as I happen to have two, I will ask one of them if he will consent to enter your service."

"Ask as soon as you like, please," murmured the imperturbable Mr. Schwab, blowing out a white cloud of Maryland tobacco.

The motorman went and explained matters to his servant, who stood waiting beside the car. "He is willing," announced the millionaire's acquaintance. "Perhaps you would like to take a short drive in order to try the machine?"

"I should. Tell the chauffeur to be before my hotel in an hour from now."

At the specified time the motor was waiting; out came Mr. Schwab with a small value in his hand.

"Where to, monsieur?" asked the driver, as his new master climbed in.

"Vienna. And as sharp as you like." nonchalantly ordered the millionaire.

If the chauffeur felt surprised he did not show it, but calmly turned the car in the direction of the Austrian capital—indeed, he might have been going to Villefranche instead of to a city several hundred miles away. From Nice to Vienna is not half bad for a little trial trip—it's a wonder that Mr. Schwab did not select St. Petersburg while he was about it.

The Johnson Electric Service Co., Milwaukee, Wis., has completed its first steam truck, which was given a successful trial.



Mrs. Flynn's Good Fortune.

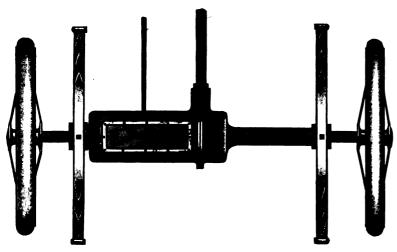
It was horse and buggy against automobile, with the latter coming out an easy victor, at Washington, D. C., last week. Mrs. Flynn, wife of Delegate Dennis T. Flynn, of Oklahoma, is the proud possessor of a new Oldsmobile, which she received under delightful circumstances. A few evenings ago she entertained at dinner the newly elected judges of the Territory, and after the repast it was decided to present Mrs. Flynn with a horse and buggy, in recognition of her husband's work in securing the passage of the statehood bill in the House. With this object in view, a subscription was started therewith, and the purse soon became so large that it was decided to invest the money in the purchase of an automobile.

All on the Rear Axle.

The new change speed gear recently placed on the market by the Neustadt-Perry Co., of St. Louis, Mo., is well shown in the accompanying illustration. The gear is encased and fitted on the rear axle. Chain drive is are connected directly with one another the arms must be inclined toward each other in order to get the proper differential deflection of the two steering wheels, and this inclination causes the variation of angularity in the two arms of the "L" of the knuckle. This angularity is less than 90 degrees when the arms extend forward, and more than 90 degrees when they extend to the rear, but in either case they vary in degree. The advantageous character of drop forgings enables the vehicle maker to have the steering arms on the knuckles bent to exactly the right angle to suit his particular vehicle.

New Locomobile Model.

A mid-season offering that is attracting considerable attention is a new Locomobile model which sells for \$650. It is designed to meet the demand for a low priced vehicle, and would probably prove a seller on its price alone. But it has other qualities to recommend it. It can best be described as one of the company's earlier models made up of entirely new stock. The tread is nar-



replaced by a shaft direct connected with the motor.

Two forward and two reverse speeds are provided. These, with the differential, run in an oil bath. There are no gears running at high speeds, and the entire mechanism is operated by one lever connection. The spring blocks are fitted on the ends of the casing and on roller bearings. The Autovelo, as the device is known, as furnished forms a complete rear axle, with differential, transmission and brake all in one, ready to have the wheels keyed in.

Elliott Steering Equipment.

One of the causes for the great popularity among automobile manufacturers of the Elliott steering equipment is, as its makers, the Billings & Spencer Co., point out, its adaptability to nearly all classes of vehicles. The knuckles can be drop forged very readily. Standard sizes, with the "L" open a little more than 90 degres, are made, which will suit all vehicles of about the same weight, irrespective of such dimensions as wheel base and gauge.

When the steering arms in the knuckles

rower than the present patterns, the latter having been widened to better equip them for coping with the average American road. The new vehicle is the same as that offered to British buyers, who have taken so kindly to it that more orders from abroad are in hand than can be filled.

Some More Chicago Rules.

Chicago' South Park Commissioners are reported to have taken action inimical to automobiles and designed to reduce their number on the boulevards in their jurisdiction.

"Hereafter no machine which emits spurts of vapor can enter a boulevard or park. No machine which leaves a trail of 'offensive odors' behind it can be run on the boulevards. Horns and whistles will have to be taken off the machines, or at least not used.

"Automobiles are to receive no privileges or immunities which are not granted to the drivers of horses. An operator may not leave his machine standing in the street chugging away with all its noisy apparatus. When it is not in use it must be 'turned off' if it is standing on a boulevard."

Used the Induction Coil.

Every day almost the uses of the automobile undergo an extension and the new vehicle becomes more closely connected with the world's needs. At Newark, N. J., rècently it was made to play one of the principal parts in a hospital operation.

An interesting examination was performed, in which a Roentgen X-ray apparatus and an electric automobile figured. It was made to determine the location of a supposed cancer in the stomach of a patient who had been suffering in the hospital for several weeks.

The hospital is thoroughly equipped with the best X-ray appliances, but for several weeks the electric batteries running the machine had not been in perfect working order. Dr. F. K. Irving, who is chief electrician at the hospital, recently operated the Roentgen rays by connecting the induction coil with the storage battery in his automobile. The automobile remained on the outside of the hospital, wires being run from it through a partially opened window into the operating room.

Later Dr. Irving suggested that the automobile be again called into service, to see if the examination could be successfully performed with its assistance. The patient, a man about thirty years of age, was brought into the operating room and the examination was made. One of the physicians said today that the illumination was the best ever observed by those witnessing the performance. The patient's body was exposed in various positions to the X-ray, and it is far more than likely, it is said, that the location of the cancer will be readily discerned as soon as the plates are fully developed.

Annoyed by School Children.

Automobilists in upper Manhattan and The Bronx have been much annoyed by school children. Tired of being constantly hooted at and made the target of repeated bombardments of decaying vegetable matter, stones and other projectiles, they have made an appeal to the Board of Education to compel the school children to cease annoying them. This is believed to be the most effective way of reaching the mischievous boys, for the abuse of automobile occupants is declared to be so general, especially in The Bronx, that the arrest in a few isolated cases of the miscreants would not effect the reform desired or mitigate the abuse.

Proof Against Upsetting.

"Jere Schug, the wall paper dealer, not to be behind the times, has procured a horseless wagon for use in his business," says an Easton (Pa.) paper. "Mr. Schug has a large and increasing trade, and needs a rapid means of transit. We met him with it going up South Seventh street a few days ago, and it was quite an attraction. Managed by Mr. James Claflin, jr., Mr. Schug's invaluable assistant, there is no danger of the wagon upsetting or running away, as some automobiles are reported lately to have done."

CAPITAL AND ABILITY

The Northern Mfg. Co. Have These in Abundance—Will Make High Vehicles.

The Northern Mfg. Co., of Detroit, Mich., is among the latest additions to the ranks of light gasolene vehicle makers, and starts in under splendid auspices. Capital and business ability, joined to an experience dating back to the very birth of the industry in this country, make a combination from which not a single element of success is lacking.

The Northern Mfg. Co. have all three in abundance. At its head is W. T. Barbour, president of the Detroit Stove Works, which claims the largest stove plant in the world. Locally the Northern Mfg. Co. is spoken of as "Barbour's automobile concern." With Mr. Barbour are associated R. G. Lathrop, a prominent attorney, as vice-president; G. B. Gunderson, secretary treasurer, and others of like standing.

That these men are amply able to furnish all the capital and business ability required goes without saying.

But capital and business ability must have something worthy of their forces, else their power is wasted. In this case they must have a product whose efficiency is on a par with their own. There is every reason to believe that they have it.

In Mr. J. D. Maxwell, superintendent, the Northern Mfg. Co. has a mechanical head whose experience in the manufacture of gasolene automobiles is probably not exceeded by any man in this country. It began at the birth of the automobile industry in this country in 1893, at the cradle of the first machine of the pioneers, the Haynes-Apperson Co. Mr. Maxwell for several years thereafter was in charge of the experimental work of this sterling company. Later on he occupied a similar position with Olds Motor Works. That he brings to his present work an invaluable fund of knowledge and experience of the most practical kind is obvious. So much for the personnel of the Northern Mfg. Co.

Its product is a gasolene runabout equipped with single cylinder horizontally hung motor, 6x4%, and develops 5 horse power. The weight of the car is about nine hundred pounds.

In appearance it shows the earmarks of Mr. Maxwell's training, being somewhat of a cross between the Haynes-Apperson and the Olds vehicles, from both of which it has perhaps unconsciously borrowed. Not that it is a mere imitation, by any means, for it has many points of its own that give it a distinct individuality. Perhaps it would be better to say that it resembles the older car's roomy and comfortable appearance, coupled with structural features that are more or less identified with the already famous little Detroit production. To say

this will be recognized as a tribute to all three.

In the disposition of the motor and body Mr. Maxwell has hit upon a happy plan. The former is set just back of the neutral point of vibration, while the latter is hung on "trunions." The thrust of the motor carries it just over the dead centre, the shock is entirely taken up by the running gear, the body resting absolutely free from it, so that the oft-claimed "utter freedom from vibration" is practically realized.

The actual performance of the vehicle leaves little to be desired.

In company with Mr. Maxwell a Motor World man was given a demonstration. To begin with, the car is practically noiseless, the freedom from the annoying vibration, as above stated, adds no little pleasure, while the motor worked perfectly, seeming to have plenty of reserve power, and while no steep hills were taken, what gradients were met with were negotiated with none of that too-familiar slow down which comes from a laboring motor.

At the same time its makers disclaim any intention of trying to produce anything approaching a speed car. As Mr. Maxwell remarked, "We can go twenty miles an hour, which is as fast as the average man cares to ride, and that is fast enough to break all the speed ordinances now in force."

In short, the Northern Mfg. Co.'s car gives every promise of being one of the most satisfactory light gasolene vehicles on the market and is certain of a ready sale.

The company expects to be in a position to make deliveries about June 15.

Improved Collapsible Buckets.

Collapsible buckets are of course a prade requisite to the motorist, but even though they take but little room when not in use, there is the need of a good sized funnel, and that is always an awkward article to store away. The thing in this line that ought to take, and prove a good seller, would be a collapsible furnel with a stop cock at the lower end made of hard rubber. This could be made of good, generous size, and yet the combination would take up but little room when not in use. It would also prevent the annoyance of spilling the water, which so often occurs in tipping the bucket to pour into a metal funnel. Again, there are sometimes awkward places in which a metal funnel will only go by tipping it, thus making the pouring of the water a matter of tedious . - 11

Rival of the Jinrikisha.

Can the automobile take the place of the jinrikisha in the affections of the Japanese? Consul Harris, of Nagasaki, thinks that this can be done to some extent. "It is likely," he says, "that a cheap automobile, holding one person, to take the place of the jinrikisha (made of the same width), would find a ready sale in Japan. There were on April 1, 1901, 206,848 jinrikishas in use in the empire, 193,249 being made for seating one person and 17,339 for two."

FOR FALL DELIVERIES

The Henry Ford Co. Will Make Early Shipments for Next Season's Riding.

Almost every one conversant with automobile affairs knows of the marvellous record of the Ford racer at the Grosse Point track, where it did a mile from standing start in 1:12.

Not so many know that the Henry Ford Co., as it is called, possesses another record, certainly a no less enviable one—that of having probably the richest lot of stockholders of any company in the land.

Included among them are C. A. Black, a well known capitalist, president; A. E. F. White, vice-president; Lem. W. Bowen, treasurer; Mark Hopkins, of St. Clair, and last, but by no means least, W. H. Murphy.

While rich stockholders don't necessarily mean good machines, plenty of money rightly applied will do much to conduce to that end.

That this is being done the plans and policy of the company prove. To begin with, the business management is in the hands of Mr. Geo. Strelinger, a graduate of the bicycle business, in which for a long time he played a prominent part, and is assuredly a case of the right man in the right place.

Up to the present time every step has been taken only after being proved; nothing but the very best of everything is being even considered, and though the company are just placing an order for 500 motors, they announce that deliveries will not begin until about November 1, or in time for next season's trade.

Their product will be a gasolene touring car of 8 h. p., double-cylinder opposed type, will weigh between 1,100 and 1,150 pounds and will probably list at \$1,200.

It is a rakish, speedy looking car, and is to be as good as it looks. As Mr. Strelinger laughingly expressed it, "It's a pup of the Ford racer, all right," and better than this would be hard to find.

The company are almost certain to cut a considerable figure in 1903 business.

Room up Front.

- "And now what do you propose to take?"
 "A course in automobile designing."
- "But is not that profession somewhat overcrowded?"
- "I believe it is, but I shall study it just the same, and those who are already in the business must take their chances."

Air and Water Pumps.

THE UNION STEAM PUMP CO., BAT-TLE CREEK, MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.



CONCERNING APPEARANCE

Woman Tells her Sex That Only "Butterfly" Automobilists can Look Pretty.

How to look well when automobiling is a problem which many women are finding a very difficult one to solve. Wind, dust and dirt—these are the disagreeable accompaniments of almost any ride of length, and the keen automobilist always goes in for such rides in preference to dawdling on parkways and suburban roads. But can such rides be taken without the sacrifice of appearances? One woman who has given the matter considerable thought says not.

"Now, madam," she says, "don't try to be pretty if you are going for a real tour, anywhere from 100 to 1,000 miles across country. You may not do this very comfortably in America at all, but in Europe, especially in France, where the roads are beautiful, there is no trouble about this whatever. If you are going to do the Riviera, starting from Paris, or if you are going to try the Austrian or the English roads, remember our advice.

"Keep your costume very much like that of the locomotive engineer, for your work will undoubtedly be more nearly allied to his experience than to that of the woman who drives about the park or the streets of a city.

"You know it's a very different thing, this riding about streets, boulevards and parks at fifteen to twenty mile rates as compared to the forty and fifty mile speeds on the unswept and dusty country roads; so madam must first of all protect herself rather than make herself beautiful. There must be a complete covering for the hair, the very first thing, or else the dirt and grime would drive into the scalp and penetrate even there, were it not for the impervious rubber bags which are worn.

"Above this, the leathern helmet with its visor, and below it a rubber or leather coat covering a short skirt, with good thick stockings and stout shoes, are almost always used, for you know it's against the law to have rugs. They are in the way, and there is danger of their falling and interfering with the levers.

"This play-day riding about, with very pretty millinery and artistic gowns, is all very well for parks, but you don't see it on European roads. However, we have both sides of the subject to deal with. But before we get away from the real touring let us tell a few points about the kind of wear that is the right thing.

"There should be gloves with gauntlet sleeves, which come over the sleeve of the garment. These prevent the dust and the draught from getting inside. There are goggles for everybody. No substitute for these has been discovered which has proven satisfactory in wear. Even the nose is covered with a semi-mask connected with the goggles, and

lower interstices of the mask are filled with fine wire, so that the breathing may be effected with the mouth closed, and by a system of percolation keeping out the dust."

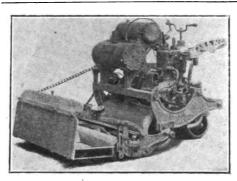
What the City Man Has to Endure.

The strenuousness of modern city life, coupled with the tacit admission that it is not automobiles alone which contribute to its dangers, is thus graphically described by The Times:

"The resident of a large city acquires instinctive vigilance and with it agility. Whenever he leaves his house he takes his life in his hand, and preserves it only by looking both ways at once and giving the right of way to everything on wheels.

"Fast horses, bicycles, motor vehicles, runaway equipages of one kind or another, fire engines, ambulances, electric or cable cars, patrol wagons, and hacks driven by inebriated cabbies cultivate quickness of perception and stimulate the energies to supreme effort when occasion demands.

"The metropolitan citizen learns to leap



MOTOR LAWN MOWER.

and dodge and duck, and can usually manage to make his way across the most crowded thoroughfares with immunity from casualty. Considering the opportunities for dismemberment and slaughter which are offered by the traffic of our streets, the number killed or maimed is surprisingly small. We learn to take care of ourselves."

Not Easy to Equal.

The question is often asked, and never answered very satisfactorily, "How many automobiles are there in use in this country?" Not even the best informed persons are able to answer it to their own satisfaction. There is entirely too much guesswork about the matter. The calculations will be made much easier hereafter, however, for the number of vehicles turned out by the concern which is admitted to stand first in this particular has been given out. It is stated by Advertising Manager Kingman of the Locomobile Co. of America that that company has so far manufactured no less than 4,000 vehicles.

Automobile deliveries of its Sunday edition are being made by the Worcester (Mass.) Telegram. The vehicle is sent as far as Fitchburg, reaching that town before 7 o'clock.

NOW THE LAWN MOWER

Brought out by an English Concern—Can Also be Used as a Roller.

Self-propelled agricultural implements have, very naturally, received no small amount of attention at the hands of firms making a specialty of such machinery, and on the whole excellent results have been obtained. Nevertheless, this branch of the industry is yet in its infancy, and it will be years before its growth will have become very pronounced.

Meanwhile the horticulturalists have not been idle. A motor lawn mower has been brought out by an English firm, and is spoken of very highly. As will be seen by the illustration, it is generously proportioned, bearing a strong resemblance to the horse-drawn mowers used on large estates. The advantages of dispensing with the horse, with its four ironshod hoofs, will be apparent.

The machine is very simple in construction, compact in arrangement, and can easily be understood by any gardener or groundman.

It consists of a 42-inch cutting cylinder, with patent divided knives and patent single screw adjustment, which, with the bottom blade, front rollers and box, is carried on a separate frame, hinged to the main axle, to allow it to follow the inequalities of the ground. This cutting cylinder is driven by a 6-b. h. p. Simms' petrol motor, with Simms Bosch magneto ignition, mounted on the main frame, to which the driving rollers, seat, etc., are also attached. The water circulation to cool the cylinder is maintained by a pump. The power is conveyed to the rolling cylinder by means of chain gear through a reducing arrangement, which is furnished with a simple gear for starting and stopping the machine quite independent of the motor. There is also a separate clutch for putting the cutting cylinder out of gear when it is required to roll the grass only.

The driver sits on a spring seat behind the machine, his weight being carried by a pair of steering rollers. He has perfect control over every part of the machine, the handles and levers for starting, stopping, steering and emptying the grass box being arranged so as to be easily within reach from the seat. The steering arrangement is such that the machine can turn in its own length, enabling it to cut round flower beds, etc. The machine can travel up to 51/2 miles per hour, the petrol tank having a capacity sufficient for a run of six hours. The grass box is emptied without stopping the machine by a special arrangement operated by the driver without leaving the seat.

One man can work and manage the machine with perfect ease, and can get over much more work during the day than when using a horse power lawn mower. Not only is the horse and its consequent hoof marks on the grass thus dispensed with, but also the man or boy required to lead the horse.

The Week's Patents

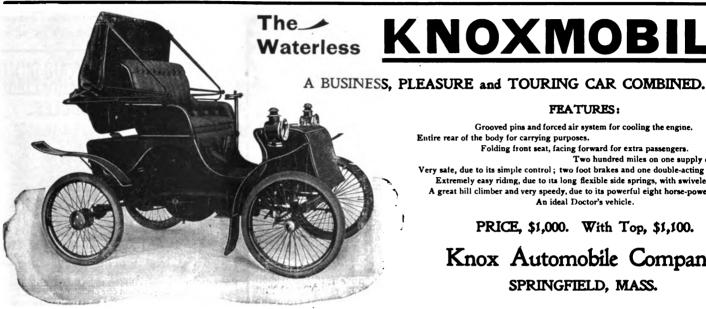
699.492. Process of Forming Storage Battery Plates. Rufus N. Chamberlain, Depew, N. Y., assignor to Gould Storage Battery Co., New York, N. Y., a corporation of West Virginia. Original application filed March 3, 1899; Serial No. 707,592. Divided and this application filed Nov. 9, 1900. Serial No. 35,981. (No specimens.)

Claim,-1. The process of forming a lead

storage-battery plate which consists in forming an oxidized coating on the plate by making it the anode in an electrolytic bath, the electrolyte of which produces an oxidizing chemical reaction upon the anode, whereby continuous electro-chemical effect takes place, and then shifting the plate thus provided with the exidized coating into the position of cathode and introducing a new unoxidized plate as anode, whereby the reduction of oxid on the first named plate serves to diminish the amount of energy required to oxidize the second plate.

699,503. Double Cylinder Hydrocarbon Motor. Fritz Dürr, Schlachtensee, Germany. Filed July 5, 1900. Serial No. 22,584. (No model.)

Claim.-1. A hydrocarbon motor comprising two parallel cylinders, two oppositely moving pistons in each cylinder, a driving shaft journalled between said cylinders, a crank mounted on the driving shaft, and connections between the pistons and crank shaft allowing the pistons in both cylinders



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We make them for vehicles weighing from 300 to 2500 pounds.

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WESTON-MOTT COMPANY, Utica, N. Y.

to move apart and to move together simultaneously.

699,504. Carburetter for Explosive Engines. James F. Duryea, Springfield, Mass. Filed Nov. 30, 1900. Serial No. 38,079. (No model.)

Claim.-1. In a carburetter, the combination of a mixing chamber having a longitudinal slot in its side wall, a partition ring in the chamber having a central axial aperture and also other apertures, an inlet pipe arranged to discharge hydrocarbon in said central aperture, a movable collar located in the chamber above said ring and arranged to control said other apertures in the partition by its axial movement, said collar being so disposed as to cover said slot in its several positions, and a screw secured to the collar and projecting through the slot, the screw being arranged to adjust the collar from the outside of the carburetter and also to clamp the collar in its positions of adjustment.

699,543. Motor Vehicle. Hiram P. Maxim, Hartford, Conn., assignor, by mesne assignments, to Electric Vehicle Co., Jersey City, N. J., and New York, N. Y., a corporation of New Jersey. Filed June 3, 1896. Renewed Aug. 18, 1899. Serial No. 727,703. (No model.)

699,583. Means for Automatic Control of Motor Vehicles. Henry H. Sherk, Pasadena, Cal. Filed Nov. 5, 1901. Serial No. 81,179. (No model.)

Claim.-1. In a motor vehicle, the combination with a movable seat and a plunger device operated thereby, of means for causing the said plunger device to press against the said seat, means for regulating the afore-said means, means for guiding the said plunger device, means for keeping the said plunger device from turning, and means connected to and actuated by the said plunger device to turn on the power when the plunger device is depressed and to automatically shut off the power when the plunger device is raised, substantially as set forth.

699,614. Ball Bearing. Merrill E. Clark, Worcester, Mass. Filed Jan. 26, 1898. Serial No. 667,994. (No model.)
Claim.—1. In a ball bearing device, the

combination with a journal, of outer and inner sleeves surrounding the journal, a series of balls interposed between the sleeves, a bushing on the journal adapted to slide thereon when the rolling friction is interrupted, rings at either end of the journal whereby to retain the ball bearings and act as stops therefor, and a flanged nut at the free end of the journal to maintain the parts in proper relation to one another.

699,631. Running Gear for Vehicles. Edward J. Pennington, London, England. Filed June 10, 1901. Serial No. 64,035. (No model.)

Claim.—In a vehicle, the combination of a fixed wheeled axle at one end thereof; an axle at the opposite end of the vehicle carrying steering knuckles and wheels adapted to be shifted in position in steering; a block or support attached centrally to the fixed axle; a pulley mounted in said block or support, and a flexible connection having one end secured to an arm on the steering knuckle of the running gear adapted to be shifted in position in steering, then passing around said pulley and having its opposite end fastened to the other and coincidently operated steering knuckle of said running gear, substantially as set forth.

699,808. Motor Vehicle. William Norris, Preston, England, assignor to T. Coulthard & Co., Limited, Preston, England. Filed July 2, 1901. Serial No. 66,828. (No model.)

Claim.-1. In motor propelled vehicles an improved yielding bearing comprising a divided sleeve, a flange formed on the sleeve, a divided ring of plano-convex longitudinal section loosely fitting around the sleeve, a supporting bracket and cover, a concave recess formed around the inside of the bracket and cover corresponding to the convex surface of the divided ring which bears in said recess, and a flexible ring placed between the bracket and flange around the divided sleeve, whereby slight movement of the shaft in a vertical plane and laterally may occur, substantially as described.

699,726. Condenser for Steam Motor Carriages. Frederick W. Turner, Cambridge, Mass. Filed March 24, 1900. Serial No. 10,003. (No model.)

Claim.-1. A condenser for steam motor carriages consisting of several upright banks of pipes arranged in parallelism at the front end of the carriage body, the pipes of each bank being disposed in different planes, supports therefor attached to said carriage body, a pipe leading thereto from the exhaust pipe of the engine and a pipe leading therefrom, substantially as described.

700,147. Sparking Plug. Charles A. Mezger, Brooklyn, N. Y., assignor to Minnie Mezger, Brooklyn, N. Y. Filed March 25, 1902. Serial No. 99,902. (No model.)

Claim.-1. The combination of a chambered plug having a sparking point thereon, an elongated conducting member forming the second sparking point and projected through the chamber and extending adjacent to the sparking point, and a tubular shell arranged in the chamber of the plug and spaced from the walls thereof and from the sides of said elongated member forming the second sparking point, for the purpose speci-

699,814. Machine for Making Battery Grids. - Willard F. Richards, Buffalo, N. Y., assignor to Gould Storage Battery Co., New York, N. Y., a corporation of West Virginia. Filed Oct. 5, 1900. Serial No. 32,177. (No model.)

Claim.-1. In a machine for making battery grids, the combination with a pair of upright spinning rollers, of an upright support for the blank or battery plate arranged to move back and forth between said rollers, substantially as set forth.

699.830. Carburetter. Daniel Best, San Leandro, Cal. Filed July 3, 1901. Serial No. 66,985. (No model.)

Claim.-1. A vaporizing apparatus consisting of an exterior casing, detaining surfaces arranged therein from top to bottom, a plurality of passages extending through said surfaces connecting with a common chamber at the bottom and the top, a passage through which hot vapors are introduced into one of said chambers and passed thence through one of the pipes and returned through the

699,994. Vehicle Wheel. Paul H. White, Indianapolis, Ind., assignor to White Steam Wagon Co., Indianapolis, Ind., a corporation of Indiana. Filed Nov. 29, 1901. Serial No. 84,116. (No model.)

Claim.—1. A vehicle wheel having its central portion formed integrally of cast metal, and comprising a central hollow hub, a series of spokes V-shaped in cross section. a peripheral rim surrounding said spokes at their outer ends, and a section tire connected to said rim, all substantially as shown and described.

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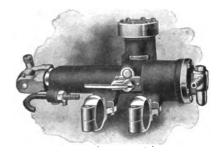
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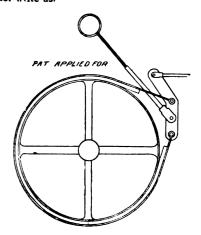
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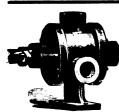
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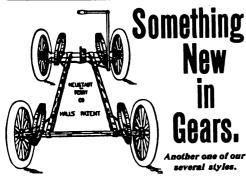
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SURREY made by the Century Motor Vehicle Co., of Syracuse, 1902 pattern. New, never used, very fast. Engine, boiler and etc. same as machine that won first prize, blue ribbon and 100 per cent., Long Island, April 26, 1902. Will accept reasonable price. W. E. HOOKWAY, Syracuse, N. Y.

OR SALE—2 3.4 H. P. motor with genuine De Dion water cooled head suitable for light carriage, never used. \$90. net. Also Orient quadricycle good as new. \$225. net. Address H. A. F., 60 E. Ninth St., Covington, Ky.

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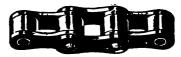
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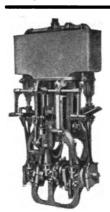


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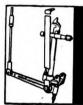
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STEARNS CARS ARE WORTH MORE THAN THEY COST.

MONOGRAM OILS AND GREASES

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ELECTRIC,

BOUGHT. SOLD. EXCHANGED, STORED AND REPAIRED.

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PRESSURE RESERVOIRS GASOLENE TANKS.



STEEL SHAPES STAMPED OR DRAWN.

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NEW HAVEN, CONN.

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AND OTHER WORK.

We are prepared to make estimates from drawings or models and guarantee first-class work.

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202-210 West 89th St., New York, are now open for the reception of all motor vehicles. REPAIRS AND POWER FURNISHED.

DARRACO CARS.

Delivered Immediately. Agents Wanted.



Winner of 47 Firsts out of 52 Races in 1901. Winner at Annual French Hill Climbing Trials at Gaillon Hill, Novem-

ber, 1901.
The "Darracq" 16 h. p. Cars were winners with the remarkable speed up an average 8 per cent. grade of 36 miles an hour, defeating all 40 h. p. Panhards and 50 h. p. Napiers.

AMERICAN DARRACQ AUTOMOBILE CO., 652 HUDSON STREET, near W. 14th St. Station, 9th Ave., L R.R. NEW YORK CITY



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Silk Hat Rye

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Remember, \$3.20 for a gallon of whiskey which could not be bought for less than \$5. if you were to pay the middleman's profit.

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IS BACKED BY ITS OWN ACHIEVEMENTS

And Not by Manufacturers' Statements Only.

WHAT OTHER AUTOMOBILE COULD MAKE A TRIP OF

2000 miles, without accident, in the middle of winter.

NO OTHER MOTOR CARRIAGE HAS EVER ATTEMPTED SUCH A TRIP.

A Standard "Toledo," driven by its owner, a citizen of Hot Springs, Arkansas, averaged over ten miles an hour for the entire distance from Toledo, Ohio, to Hot Springs, Arkansas.

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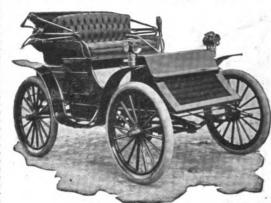
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is to Always Take

the Blue

Ribbon.

The only automobile to win in the Long Island Endurance Test two years in succession.

We have never entered a contest that we have not won.

ANY OF OUR CARS WILL MAKE THE SAME RECORD.

WE MAKE SURREYS, PHAETONS, RUNABOUTS. PLENTY OF POWER. PRICES, \$1800, \$1500, \$1200.

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HAYNES-APPERSON CO., Kokomo, Ind., U.S. A.

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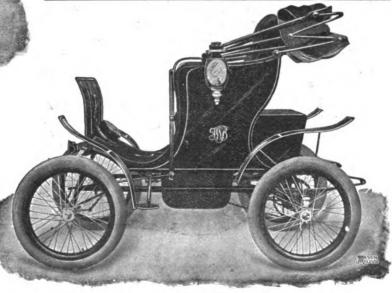
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THE LIGHTEST, STRONGEST AND MOST DURABLE OF ALL MOTOR VEHICLES, # # # #

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Baker Motor Vehicle Company CLEVELAND, OHIO.

B A K E R BEAUTIES



STANHOPE.

June 17th 1890 March 9th 1897

PATENTS

Tire Troubles

Stopped

By injecting one tube of AUTO-MOBILE NEVERLEAK into each of your tires your tire trouble will absolutely cease. AUTOMOBILE NEVERLEAK will preserve the rubber and fabric and will not prevent plugging or vulcanizing should a severe accident render such repairs necessary.

NEVERLEAK

is used and recommended by tire manufacturers and is the only liquid that can be legally used in any pneumatic tire.

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WHITE STEAM CARRIAGE

now has the great glory of being

THE ONLY STEAM VEHICLE THAT EVER COMPLETED 100 MILES ON THE ROAD.

without adding a drop of fuel or water to its original supply.

The White has no boiler and does not, perforce, depend on boiling water for its steam.

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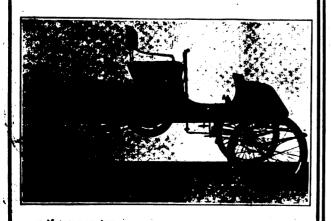


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WATER TANK GAUGE. GASOLINE TANK GAUGE.
AIR TANK SEPARATE. ENGINE AIR PUMP.
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We make our sales to purchasers of experience.

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WINTON TOURING CAR

Both Wintons entered in the Long Island 100-Mile (Non-Stop) Endurance Contest made 100 per cent. exhibitions.

TO EACH WAS AWARDED A BLUE RIBBON.



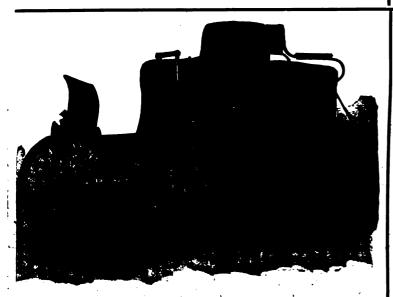
Touring Car—Tonnbau Detachable.
PRICE, complete, \$2,000.

The Winton Touring Car (Class D—less than 2000 lbs.) captured first honors and the silver cup award in the hill climbing contest.

"A PRONOUNCED LEADER IN DURABILITY AND EFFICIENCY."

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Reading Steamers

Are all they OUGHT to be and a little more; different from most steam carriages in that respect.

The performance of the car itself is the most convincing testimony of its worth.

WILL TELL YOU ALL ABOUT IT FOR THE ASKING.

Good Agents Only Wanted.

PROMPT DELIVERY.

STEAM VEHICLE COMPANY OF AMERICA, 52 West 43d Street, New York.

_____GROUT BOX FRONT Steam Touring Wagon.

IT HAS LET DOWN BACK WHICH CONCEALS TOOL CHEST.



Write for other improvements not shown in 'cut, but which are contained in this carringe. GROUT BROTHERS, ORANGE, MASS.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, May 29, 1902.

No. 9

SAME OLD THING

American Automobile Association Adopts Racing Rules of its Predecessor Unchanged.

Surprise and some disappointment will be occasioned by the perusal of the racing rules of the American Automobile Association, which have just made their appearance.

It was generally supposed that the rules of the Automobile Club of America, which had been adopted as a basis, and which had been severely criticised, would undergo considerable change. They were sadly in need of revision, being almost as remarkable for the points not covered as for those given unnecessary space.

As it turns out, however, nothing of the kind has been done. The changes rendered necessary by the substitution of the American Automobile Association for the Automobile Club of America have been made. The maximum fine which the stewards may impose for violations of the rules is increased from \$100 to \$500. Outside of these the new rules are almost an exact duplicate of the old ones.

Ordinance for Columbus.

An ordinance has been introduced in the Columbus (Ohio) City Council regulating the speed of automobiles on the streets of that town. The ordinance limits the speed of automobiles to eight miles per hour in the territory bounded by Buttles avenue on the north, Jefferson and Parsons avenues on the east, Livingston avenue on the south and Sandusky street on the west, and ten miles per hour in other sections of the city. The ordinance further provides that headlights shall be displayed on all automobiles at night, and that alarms shall be sounded at street crossings.

Martin Gets his Commission.

In a suit brought at Buffalo, N. Y., by Hiram C. Martin against the Kensington Automobile Co. the jury awarded Martin \$414.65, with interest from July 19, 1901. He sued to get commission for the sale of an automobile.

Has Only Seven Horse Power.

Sole entrant in its class, the Baker electric racing car is confidently expected to place to its credit the record for one mile. This is now held by the Riker "skeleton," which in the trials on the Coney Island Boulevard last fall covered the distance in 63 seconds. There are some remarkable features about the Baker vehicle. It was especially designed and constructed, and great care has been taken to see that every part was fully able to do the work that will be required of it. Although it weighs close to 3,000 pounds, it is rated at only 7 horsepower. It carries two men.

Claim and Counter Claim.

In Milwaukee, Wis., last week, Judge Halsey began trial of the case of the Whiteley Steel Co. against the Milwaukee Automobile Co. The plaintiffs sue for \$1,142.57, the price of steel fittings and patterns. The defendants counterclaim for the sum of \$10,225.56. They claim \$5,200 for damages from being unable to operate their plant from May 1 to July 1, 1900, fifty-two days, at \$100 per day, and \$4,800 as damages to their business and reputation caused by the delay.

Whitney Brings Another Suit.

Another suit has been added to the steadily lengthening list of those brought by the Whitney Steam Motor Wagon Co., of Boston, for alleged infringement of the Whitney patents. This time it is the Foster Automobile Mfg. Co., Rochester, N. Y., which has been selected. The case is set to come up for trial at Buffalo in the June term of court.

Exports Slump a Little.

Exports of automobiles and parts for the month of April amounted to \$151.199, and for the ten months ending with the same month to \$668.731.

Webster Gets Rambler.

W. II. Webster, 10 West Sixtieth street, New York, has secured the uptown agency for the Rambler gasolene carriage.

N. F. Gates, superintendent of the Automobile Transportation Co. of Porto Rico, is in the city.

NON-STOP READY

Seventy-Five Vehicles Have Been Entered— List a Representative One.

In the seventy-five entries for the 100-mile non-stop run of the Automobile Club of America, which takes place to-morrow, scarcely one of the names familiar to motor vehicle users is missing. The showing of both the American and foreign trade is a most representative one, and a very large number of the vehicles which participated in the Long Island run in April have been entered for this one.

The proportion of gasolene cars is a little greater than has been the case in former events. It numbers fifty-five, as compared with eighteen for the steamers and two electrics

The start will take place at 9 o'clock from the club rooms at Fifty-eighth street and Fifth avenue. Contestants are required to report at 7 o'clock at Fifty-eighth street and Sixth avenue for the purpose of having the tanks of their cars measured for the consumption test. Observers must report at the club rooms at 8 o'clock, and they will be assigned to their vehicles as soon as practicable. Each observer has been sent a copy of the rules, map of the course, etc., and is expected to understand the nature of his duties.

The speed regulations must be strictly adhered to. From the starting point and until a white flag is passed the eight mile speed must be maintained, and thereafter whenever a green flag is encountered the same speed must be observed. Outside of these limits twenty miles an hour is permitted in this State and fifteen in Connecticut.

Following are the entries:

CLASS A.-GASOLENE VEHICLES.

Entrant and vehicle. H.P.	Passen- Wt. gers.	
Adams & McMurtry Co. (Pack-	0100	
ard)12	2100	2
A. R. Shattuck (Panhard)12 Adams & McMurtry Co. (Pack-	2500	3
ard)	2100	2

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DASHWOOD HILL TRIALS

Consumption and Time the Factors—Much Valuable Data Secured.

Dashwood Hill, on the London-Oxford road, the scene of the hill climbing contest of the Automobile Club of Great Britain on May 10, is a much less awe-inspiring "pimple" than Nelson Hill of unsavory memory, but it is a good grade nevertheless. The contest itself was extremely interesting, and in conjunction with the consumption test held in connection with it made possible the compilation of much valuable data.

Thirty-three vehicles started in the run which began the contest, and twenty of them entered the hill climbing contest itself. Under the rules the day's events were divided into three parts—A, the run to the hill, distance 33 miles; B, the return over a slightly different course; C, the hill climbing.

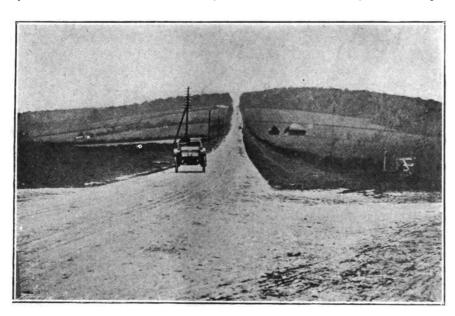
time climb figured out. Next in order of merit was an Excelsior motor bicycle, which made 18 miles an hour, and then came a 12 horsepower Gladiator, its time being returned as 14.20. It was followed by an Ormonde motor bicycle in 13.40. The fifth vehicle was a 28 horsepower Mors, in 11.77, but it was disqualified for being driven too fast down the hill, and a Weston steam car, rate 11.10, took its place.

In the consumption contest a remarkable record was made by a 5 horsepower Baby Puegeot, which did the outward journey of 33 miles on a consumption of .84 gallon of gasolene, and the return on .843 gallon, or a little over 1½ gallons for the 66 miles.

Novelty in Acetylene Gas Lamps.

In an automobile lamp shown at the recent British show a novel system of decomposing calcium carbide and forming acetylene gas is used.

Instead of water a patented compound is



LOOKING UP DASHWOOD HILL

In connection with each there was a consumption test, while on the hill the time was also taken.

The hill is 1,005 yards in length, with an average gradient of 1 in 14.3. The major portion of it was 1 in 11, and 352 yards came out at 1 in 10.9. The surface is described as being somewhat loose. Up this hill each contesting car was sent seven times in succession and its mean time taken.

The guest of honor was the Hon. A. J. Balfour, the Conservative leader in the House of Commons. For his especial delectation a fast trip up the hill was made in the 40 horsepower racing Mercedes owned by A. C. Harmsworth. It was covered in 1:11, which figures out at just 29 miles an hourvery much the fastest time of the day.

On the hill the best performance was made by a Humber motor bicycle, which, starting from a stand, as all the vehicles did, averaged 19.55 miles per hour for the four miles of uphill work which the seven

used, which resembles in appearance fine pulverized s.da, but of a slightly yellow color. This substance is laid in the bottom of the gas generating chamber, and the fine ground calcium carbide is dropped into it automatically by a valve operated by a governor. The carbide coming in contact with the decomposing material at once forms the gas, which rises up through the gas generator to a chamber having above it a rubber diaphragm. This diaphragm controls the valve which lets down the powdered carbide into the generating chamber.

So long as there is a certain pressure of gas being generated the diaphragm is held up by the pressure and the valve closed. When the pressure falls, indicating a reduction in the speed of generating, the rubber diaphragm is let down and the valve opened, letting in more carbide. The result is automatic generation of gas, a purer gas without the carbonizing of the burners or gas tubes, and residuum which is dry and easily cleaned out without dirt.

ON TO STATEN ISLAND

Saturday's Speed Trials Makes This the Mecca —How to get There.

On Saturday all roads in this vicinity will lead to Staten Island. There the much heralded one mile contest of the Automobile Club of America will take place. The hour set is 11 o'clock, at which time everything is expected to be in readiness for the starting of the first vehicle.

Chairman Dave H. Morris of the Racing Committee describes the three routes available for reaching the scene of the contest. These are as follows:

- (1) Cross the ferry at the Battery to St. George; thence by Bay street to Vanderbilt avenue and Richmond Road to New Dorp Lane. This route will be marked by yellow arrows. At New Dorp Lane there will be a sign directing spectators to turn sharp to the left. This lane will bring you out at the fluish.
- (2) Cross Forty-second street ferry to Weehawken and thence by Hudson County Boulevard, to Bergen Point ferry, to Port Richmond, and thence by Clove Road into Richmond Road, to New Dorp Lane.
- (3) Spectators from New Jersey may cross Elizabethport ferry in automobiles to Staten Island; thence by North Shore Road to Port Richmond, and thence by Clove Road to Richmond Road and New Dorp Lane, or can take trolley on Staten Island side to Grant City.

Arrangements have been made by which automobiles may be parked on the west side of the track within an inclosed space, but no horse drawn vehicles will be permitted in this space.

The course may also be reached by taking ferry to St. George, and there taking the Midland trolley, which will run under two minutes' headway, to the track at a point a few hundred feet from the finish. To get to the Midland trolley cars turn to the left after leaving the boat and pass out of the carriage entrance to the end of the pier. The Staten Island Rapid Transit train at St. George can also be taken, which will land at Grant City, being five minutes' walk from the track.

Boats will leave foot of Whitehall street (Battery) for St. George at 9, 930, 40, 1030 and 11.

The club has secured headquarters at the track at the Boulevard Hotel, where coats and wraps may be checked. The committee suggests that it would be more satisfactory to bring luncheon if possible. The hotel accommodations are very limited, and there will probably be more people than they can attend to. There are also some hotels at New Dorp and Midland Beaches, near the track, where luncheon can be had.

None of us want to see our attempts at repairing belittled, but most of us are willing that they should be made less.



ANCIENT AND MODERN

After Years of Desuetude the Country Inn Again has a Chance.

"The roadside inn is waking up from its seventy-year sleep. And it finds itself in much the same plight as did Rip Van Winkle after his century slumber," says an across-the-water contemporary.

"The old coaching days are gone; the new motor car era has set in. And the roadside inn is mostly unprepared for the change. Railways robbed it of old-time guests, and with few exceptions the country inn of today has not realized that a new set of customers has sprung up.

"The cyclist did something toward rejuvenating the wayside 'public,' and the more pretentious country and country town inn. But the cyclist has mostly had to put up with bread and cheese in a stale-air bar parlor or unsatisfactory meals in a more pretentious coffee room. On motoring main roads there are some inns and small hotels where plain meals and very fair accommodation may be safely reckoned on. And some of the fine old coaching houses have not lost their reputation for good cheer and a hospitable welcome to their capital beds and board.

"Nevertheless, the autocarist is beginning to find out to his cost that the cyclist has not altogether prepared and made smooth the way for the wealthier contingent of the motor car. In some of the loveliest and most inviting rural spots in England all the traveller can hope for is cold beef, bread and cheese and beer. If the bread were crisp and delicious after the pattern of France, the butter and cheese good, this is no bad meal with a foaming bottle of Bass to set before a hungry motorman. But the bread of the remote British village is sadly apt to be soured, the butter salt and rank, and the cheese indifferently bad.

"A cup of drinkable tea or coffee is absolutely beyond the inventiveness and resource of a bucolic host. Cyclists' rests and tea rooms, as a rule, offer but sorry provender to the wayfaring automobilist.

"We are admittedly a cookless nation, and beyond the radius of the big towns and cities the standard of meal serving is apt to be primitive. But mine host—and mine hostess, too!—in country parts must needs rise to the rapid transit situation.

"Motorists are but mortal—and motorists must eat! By far too many cars—from the landlord point of view—carry their own luncheon baskets. This is not economy, but self-protection on the part of the autocarist. From the village inn he is too often sent hungry away! Like a sensible man, he fills his knapsack with good things and rises superior to a slovenly and lethargic series of country inns.

"The motorist has money to spend on his meals. But he is not going to pay the fancy

value some village landlords put on their unappetizing provender when they see a car coming.

"The golfer has found that hotels have risen fairly to the occasion of a nearby links. Cyclists appear to be satisfied with the myriad places of refreshment that have risen with mushroom growth on the roads most frequented by bikists. The motorist who runs far afield is apt to find that pot luck at a rural inn affords but very sorry entertainment to him, his wife and his carload of friends and companions.

"It remains to be seen whether the British innkeeper has the enterprise to furnish up his seedy bar parlors and coffee rooms, raise the standard of cooking and service to some degree of refinement and efficiency, and offer his car customers a sound, substantial menu of nicely grilled chops and steaks, decent tea and coffee, with tempting rolls and butter. It is very little to ask, but it is 200 per cent more than the motorist can count on getting at the average roadside inn.

"Sometimes he chances on a capital reception and a fair all-round British type of meal.

"But one swallow does not make a summer. And a rare find of this sort doesn't alter the automobilist's indictment of the English roadside inn in general."

One or More Cylinders?

In the opinion of La France Automobile, it is still a question among manufacturers whether the single cylinder motor represents the best practice.

"A certain number of makers have adopted the single cylinder motor on account of its small first cost, the simplicity of its mechanism and its consequent freedom from breakdown," it says. "These advantages are, of course, evident, but the opponents of the single cylinder say that for a motor of more than 5 horsepower the benefit is more apparent than real, and for the following reasons:

"As is well known, in the single cylinder motor there is an impulse every other revolution only, while with two cylinders there is a power stroke every revolution. The impulse reacts on the piston, the crankshaft, the gears, chains and tires; but if the power is exerted at long intervals, the shock must necessarily be more violent than if the intervals are shorter, but the explosions more numerous.

"We consider then that the deterioration of all the transmission mechanism of a car with a single cylinder motor is more rapid than is the case with a double cylinder motor of the same power. Again, if an accident should happen to the single cylinder the car is useless, but should the same thing happen with one of two cylinders, it is always possible to proceed slowly with the other. Apparently, then, four cylinders would be even better than two, but unfortunately the price increases, not as the number of cylinders, but as the square of that number, so this is only possible with comparatively high price cars."

HYDROLEUM METER-TUBE

Many Advantages Claimed for Boilers of This Design—Increased Surface.

Having given most satisfactory results in the way of economy in the case of large stationary water tube boilers, efforts are now being made in England to utilize for steam motor vehicles the Hydroleum system of firing:

By the use of this system all description of liquid hydro-carbons, from petroleum to the various tars and tar refuse, can, it is claimed, be completely consumed without smoke or smell. The devices, under which the system is carried into effect, comprise a feeder and a combustion chamber of novel construction, which can be applied to existing stationary, locomotive or marine boilers and other furnaces as well as to steam motor cars.

The burner or feeder has two passages through it, one passage being connected with the oil supply and the other being a steam connection from the boiler or otherwise. The feeder is so constructed as to concentrate the issuing products instead of, as heretofore, to spread the vapors too abruptly; the oil is only at atmospheric pressure, and the reservoir from which the feeder takes its supply is slightly lower than the outlet nozzle of the latter, thus preventing any flow of oil into the furnace when the feeder is not in action, and also allowing the feeder to suck its proper quantity of oil, no matter whether it be going fast or slow.

The two passages through the feeder are arranged concentrically, the old outlet being the central one in advance of the steam one which surrounds it. This formation permits of a vacuum being formed in front of the oil orifice, which vacuum produces a "suck" of oil from the reservoir. The outflow of oil relatively to the volume of outcoming steam is regulated by a needle valve operating at the point of outlet.

The issuing products are directed on to a dash-brick; but it is essential, in order to produce complete combustion, that the dashbrick should be of a certain size, and located in a certain position, and that between the feeder nozzle and the dash-brick there should be an enveloping constricted way or passage of refractory material, the area of which bears a certain proportion to the size of the feeder employed. By these means every particle of vapor is kept together until it fires on the dash-brick, which, owing to the concentration of the vapors at that point and its comparatively small area, rapidly becomes sufficiently heated to split up the vapor into its component gases, which, after leaving the brick, reunite and give out heat in the main combustion chamber. No vaporisation of the oil occurs in the feeder, every particle of oil reaching the firing point. A feeder to generate steam in a 14-h, p. boiler is stated to consume from 134 to 21/2 gallons of heavy oil per hour.

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FIELD OF FLYERS

To Descend on Staten Island on Saturday—Some of the Likely Ones.

It is a fine field of vehicles which will face the starter in the Staten Island mile trials on Saturday. The list totals just two short of the half hundred—forty-eight. In it are included types of most of the fastest motor cars in the world, both Europe and this country sending its choicest products.

In the gasolene class there is the Mercedes-Simplex, probably the fastest racing car in the world to-day. Against it will be pitted the Mors car with which Fournier won the Paris-Berlin race and the Coney Island speed trials. The Ewing Panhard, which covered the L ng Island century course in a little over two hours last month, with E. Voigt at the wheel, is entered, and will have a chance to let out any links that were kept in on that day. Other foreign cars, such as Darracqs, Rochet-Schneiders and Renaults, will rub tires with the pick of the American vehicles-the Winton, the Knox, the Riker, the Knickerbocker, the Baker, the Packard, the Locomobile, etc.

Among the steamers the Locomobile figures prominently, as usual, while the Prescott, the special vehicle of G. C. Cannon, and an enigmatic entry of J. W. Howard will also battle for the award in their class. The Baker is the only electric entry, and a Mercedes, a Panhard and two Locomobiles are among its companions.

The list follows:

CLASS I.-MOTOR BICYCLES.

CLASS I.—MOTOR BICYCLES.
Entrant and vehicle. H.P Joe Tracy (Orient). 3½ C. H. Metz (Orient). 3½ Motor Cycle Mfg. Co. 4
CLASS IIMOTOR TRICYCLES.
No entries.
CLASS III.—GASOLENE (under 1,000 lbs.)
L. S. Thompson (Renault)
CLASS IV.—GASOLENE (1,000 to 2,000 lbs.)
Ernest Cuenod (Robert Schneider) 10 Jefferson Seligman (Mors) 12 Albert C. Bostwick (Panhard) 10 E. A. Riotti (U. S. Long Distance) 7 Percy Owen (Winton) 15 Charles D. Cooke (Darracq) 25 F. A. La Roche (Darracq) 16 A. L. Riker (Riker) 12
CLASS V.—GASOLENE (over 2,000 lbs.)
H. H. Rogers, Jr. (Mercedes) .35 William Guggenheim (Panhard) .24 W. P. Morton (Mercedes) .35 E. E. Britton (Panhard) .16 J. E. Ewing (Panhard) .24 E. R. Thomas (Panhard) .40 Roy A. Rainey (Panhard) .40 E. E. Britton and A. J. Levy (Mors) .60 Ernest Cuenod (Mercedes-Simplex) .40
CLASS VI,—STEAM.
S. T. Davis, Jr. (Locomobile)10

S. T. Davis, Jr. (Locomobile)
Lawrence E. Holden (Locomobile) 8
George C. Cannon (special)10
H. M. Wells (Prescott)4½
John W. Howard (Howard)
John W. Howard (Howard)
CLASS VII.—ELECTRIC.
Baker Motor Veh. Co. (Baker Electric) 7
CLASS VIII.—FREE-FOR-ALL.
W. P. Morton (Mercedes)35
Baker Motor Veh. Co. (Baker Electric) 7
E. R. Thomas (Panhard)40
S. T. Davis, Jr. (Locomobile), two en-
tries 7-1
A. L. Riker (Riker)
C. H. Metz (Orient Bicycle) 31/
G. B. Adams (Packard)12
J. B. Howard (Howard) 8

St. Louis in 1904.

The Transportation Department of the St. Louis World's Fair, which is to be held in 1904, is thus early making a strong bid for a large and comprehensive exhibit of automobiles. The building assigned to this department will occupy the largest space of any on the ground. It is to be rectangular, 1,300 by 525 feet, covering an area of fifteen acres, a shape which allows every foot of space to be utilized to advantage.

The automobile industry will be assigned a prominent space in the building. It is expected that the largest and most complete exhibit of automobiles ever installed at any exposition will be made at St. Louis. The exposition having been postponed until 1904, there is abundant time for the preparation of exhibits, but none too much. Early interest on the part of exhibitors will be to their advantage and greatly facilitate the work. The department is ready to enter into correspondence with those who are considering making large and important exhibits.

Reckless Operator Escapes.

Cable dispatches record the death in France of A. Verheyen, a German cyclist and automobilist well known in this country. At the Chicago Automobile Show last March he was present, in company with Henry Fournier. The circumstances surrounding his death were particularly regrettable. It appears that Fournier had sold a 60 horsepower Mors to W. R. Hearst, to be delivered at Florence. He sent a machinist to pilot the automobile to Italy. He was accompanied by Verheyen.

The machinist drove the automobile down a crooked hill near Montereau at sixty miles an hour. He failed to make the turn and collided with a tree. Verheyen was instantly killed. The reckless machinist did not have a scratch.

To Meet Non-Stop Runners.

On Friday, the day on which the non-stop run of the Automobile Club of America takes place, the Automobile Club of Bridgeport will have a parade and run to mark the official opening of the season. The principal streets of the city will be traversed, and then the club will run to Greens Farms, the turning point of the non-stop run.

PUNISHMENT METED OUT

Automobile Club Reprimands one and Suspends two Members for Illegal Speeding.

At last the Automobile Club of America has visited punishment upon members charged with violating the law relating to the speeding of automobiles. Three members—Messrs. J. G. Lyman, K. A. Skinner and E. B. Gallaher—were accused of exceeding the legal limit in the Endurance Run of the Long Island Automobile Club last month. They made practically no denial of the charges.

The punishment, however, turns out to have been a very mild one. Lyman, who was regarded as the worst offender, was suspended from the club for six months, while Skinner, who came next, got off with just half that time. The other member of the trio, E. B. Gallaher, was let off with a reprimand.

Of the more than a dozen contestants in the Long Island run referred to who exceeded the time limit of six hours and forty minutes set by the club, the three men referred to were the only members of the Automobile Club of America. All of those concerned were promptly disqualified by the Long Island club. In consequence of the incident the American Automobile Association passed a resolution to the effect that it will hereafter suspend any one who violates the rules of the club conducting similar contests, provided the club requests such action.

"We are resolved to stop these violations of the speed laws by our members at all hazards," President Shattuck of the Automobile Club of America is quoted as saying in reference to the case under notice. "Dr. Lyman was given the heaviest punishment because his offence seemed the most flagrant. Mr. Gallaher was but three minutes ahead of the limit of disqualification, which had been extended by the Long Island Automobile Club in making the awards, and so was merely reprimanded."

One of those rumors which come from no one knows where is afloat to the effect that the times admitted to have been made by the accused members are considerably at variance with those taken on the day of the run.

'Bus Line a Success.

Two additional motors have been ordered by the Mobile Transit Co., Dunkirk, Ind., and they will be in operation by June 1. The company is operating between Redkey and Dunkirk, and business has grown until four machines will be needed to handle the passenger and excursion traffic. The vehicles carry fifteen passengers and two tons of baggage, make all railroad connections at each town, and side trips by arrangement. The new machines will be used between Dunkirk, Muncie, Pennville and Portland.





Published Every Thursday

By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING
154 Nameu Street,
NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

London Office, 53 Floot Street,		C. W. BROWN.
Paris Office, 2 Rue d'Abbeville,	•	R. F. COLLINS.

Subscription, Per Annu	m [Po	stag	e Pa	ld]		\$2.00
Single Copies [Postage	Paid]				10	Cents
Foreign Subscription						\$3.00

Invariably in Advance.

Poetage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders cheeld be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therafer is in hand on SATURDAY preceding the date of publication.

These who are interested in motor vehicles will find the smallties and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N. Y Post Office, November, 1900.

NEW YORK, MAY 29, 1902.

Two Widely Differing Trials.

Reliability and speed are the qualities required of the vehicles which have entered for the two contests scheduled to take place on Friday and Saturday of this week.

The non-stop run will test the former quality. This notwithstanding the fact that the route covers only 100 miles, and that speeding is strictly tabooed. A breakdown, even of the most trivial or temporary character, will be fatal to the chances of the car concerned. As the roads vary from fine to bad, and the operators will cover an equally wide range, it is easy to see that the chances of failure are by no means inconsiderable.

Diametrically opposed to these are the qualities expected of the contestants in the Staten Island trials.

There speed reigns supreme. The course selected is smooth and level, almost straightaway, and it offers unbounded possibilities for the annihilation of time. Nerve and skill on the part of the operators are essen-

tial, of course. But they must be accompanied with speed and power in the car, else they will avail not the slightest particle.

Much history will be made on these two days, and in the making thereof there will be plenty of excitement and interest.

A Lesson in Chains.

In the economy of the motor vehicle chains have come to play a very important part. The belts which formerly found favor in some quarters for transmitting the power have quite gone out of fashion, and at present the bevel gear is the only drive that the chain has to contend with.

There are chains and chains. That is a fact that scarcely needs to be stated. We have examined chains that have been run many thousands of miles, and they showed but little wear; certainly not enough to impair their usefulness.

On the other hand, we have had experience with chains that were very far from being commendable.

An example of this was a chain of English manufacture—one of the very best makes, too. It had been run for a long time, and it is only fair to say that it had seen its best days. But in spite of that the condition it was in argued something radically wrong with its construction.

Every one of the rollers was badly worn. Many of them were broken or crushed, and there was scarcely one that was in even passable condition. Each link had play in it, and it was very evident that in a few hundred miles more of service what was left of them would be ground to nothing and the chain would be a rollerless one.

Without a more extended knowledge of the chain's career it would be unfair to condemn it unreservedly.

But it certainly did look as if some defect in the rollers must have developed to bring about such an utter failure as was to be seen. The other parts of the chain were apparently all right. A complete set of new rollers would have made the chain good for thousands of miles of service.

The Real Solution.

One of the most remarkable symptoms of the anti-automobile feeling which has made so much progress during the past few months in many sections of the country is the utter misconception of the real situation which exists.

Even the most extreme autophobes will

admit, if driven into a corner, that automobiles should be permitted to go faster on some streets than on others. Sometimes he will even add that eight miles an hour in city suburbs is a little slow, and admit that it might be made ten or even twelve without causing any marked increase in the death rate. But it is the congested streets he is concerned about, he will say. Speeding there is dangerous, and no increase in speed can possibly be permitted.

If he only knew it, he is at one with the great body of automobilists.

They do not want a license to make nuisances of themselves in such places. They are quite content with eight miles, and refrain from grumbling if they have to slow down to six or even four miles when the traffic is very heavy. And they would do this if they were permitted, under the law, to go ten or twelve miles an hour.

For, when all is said, there is really very little difference of opinion between the autophobe and the average motor vehicle user.

The latter does not seek trouble. In fact, he will take unusual precautions to avoid it. Where he has to go slow he will do so without any more grumbling than is natural under the circumstances. But when he gets out where the streets are clear, and twelve or fifteen miles an hour is quite as safe as one-third the speed would be downtown, he very properly wants to avail himself of the opportunity thus presented to him.

There are towns where the common sense view of the matter is taken. An ordinance that is fair to all concerned is passed, and, being enforceable, it is almost certain to be enforced. In Cleveland, Ohio, for example, two speeds—ten and fifteen miles—are permitted within specified limits, and it is dollars to doughnuts that if the authorities do their duty there will be nothing to complain of in that city.

Contrast such an ordinance with the one introduced at Indianapolis, as noted elsewhere. All vehicles must slow down to a walk when coming to the crossing of an intersecting street or when passing designated alleys, etc., if this precious measure becomes a law.

Such an ordinance cannot be enforced. From the time of its passage it would be stamped a failure, a farce of the baldest and most pernicious kind.

Unenforceable laws are almost the equivalent of no laws. In some respects they are worse, for the police are helpless, deprived



of real authority or forced to arrogate to themselves judicial functions utterly foreign to their positions. Yet the injudicious course of those who condemn motor vehicles in toto brings about, or causes to be continued, just such conditions.

A reasonable law, such as the Cleveland one—which, it is pleasant to note, was brought about largely through the efforts of local automobilists—will do more to cure the evils complained of than all the crusades that could be started in a hundred years.

Saffron From Unexpected Quarters.

When it comes to treating of the automobile a considerable section of the metropolitan press is constantly on the verge of hysterics.

Traditions are cast to the winds in some offices. For example, the deadly dull and ultra conservative Tribune runs the World hard in the race for the saffron-hued honors. On the other hand, the erratic Journal is at times marvellously mild when this topic comes up, while the thoroughly modern but unsensational Times periodically indulges in diatribes, of which its hint that the bullet was the proper method to resort to in order to curb automobilists is a sample. The latter has moderated its transports of late, however—a change which may have some connection with some rather sharp letters of remonstrance from its readers.

At the present time it is the World and the Tribune which most frequently indulge in automobile baiting. The following editorial expression of opinion from the latter is an illustration of both its unfairness and its unreasonableness, not to dwell upon its ignorance:

"The interesting announcement is made that at a date in the near future some automobile races are to be held on a straightaway mile course on one of the public thoroughfares of this city. The street selected is a particularly good one for speed, all vehicles of all kinds save those engaged in the races are to be excluded from the course at the time, and it is accordingly hoped that the records for speed will be broken.

"It seems not improbable that such will be the case. We shall not be surprised to see the record for highest speed made by some machine whose proprietor has vehemently declared it in a police court to be unable to go faster than ten miles an hour.

"The announcement concerning the races is, however, incomplete. It should include a

statement of the authority by which the public is to be arbitrarily excluded from a public highway in order that the latter may privately be used for lawbreaking purposes."

The disingenuousness of this is seen in the characterization of a course in a remote section of Staten Island as "one of the public thoroughfares of this city." The assertion has a leg to stand on, to be sure—the course really is in the limits of Greater New York. But outside of this bit of truth the locality is about as much removed from any likeness to a city street as it is possible to imagine.

The second statement is marked by dense ignorance. It will probably surprise the Tribune to learn that the Staten Island contest is to be one for speed, and that cars specially constructed alone have any chance to win. To pick the winner from the average roadster is the height of absurdity.

Apparently it does not occur to the paper founded by Horace Greeley to reason that the body which passes an ordinance regulating traffic also has the power to suspend, change or abrogate any or all of the provisions of such an ordinance. The proposal, now pending, to increase the maximum rate of speed of automobiles in this city from eight to ten miles per hour is one case in point.

Is to be Expected.

The automobile is very much in the public eye just now, and will be even more prominent as the months go by. The press devotes what sometimes seems to be an inordinate amount of its valuable space to it.

Much of this space is devoted to the baiting of the motor vehicle or its owners or users. No opportunity is lost to make the most of the happenings, sometimes real, sometimes imaginary, which befall it. The calcium light of publicity is turned with unerring precision on every event in which an automobile figures.

All this is to be expected, of course. It is really the penalty which all new movements must pay, and the steadily increasing interest taken in the doings of the self-propelled vehicle demonstrates, if such demonstration were needed, the enduring nature of the hold it has taken on the present generation.

How One Test was Made.

As the strength of a chain is the strength of its weakest link, so the stanchness of a manufactured article is measured by the durability or lastingness of its weakest part. And from this viewpoint it is held that ideal construction is attained only when all the parts of a machine call for simultaneous repair, renewal, replacement or reinforcement, while the opposite of ideal construction is that in which now this, now that part, gives way under use or strain, when we have constant tinkering and repair and refurbishment.

In the pursuit of investigation along the lines indicated above, and in the search for all-round lastingness and general average durability in construction, an interesting test has been made in connection with a locomotive. All the parts were separately weighed before assemblage, and then, after a certain period of road service the engine was dissected and each part reweighed and examined to determine which had weakened most, the idea being to hit upon the measure of weakness in the various parts. A commentator is of opinion that such a test, applied to the automobile, would be of great value to the maker.

When we come to think of it, we cannot but wonder why the "yellow" Journals have failed of late to speak of the motor vehicle as the "modern Juggernaut." Formerly this was one of their grandstand plays. Every other paragraph in an article bearing even in the remotest way on automobiles was graced with this fine sounding term. The picture it instinctively brought before the reader—the hideous car of the ancient god remorselessly ploughing its way through and over hordes of passive Hindoos—was a vivid as well as an appropriate one. But the word seems to have lost its savor. Perhaps it is too tame to suit the present circumstances.

That the old order is changing and the new one coming is evidenced in many ways. One of these is the advertisement which appeared in the Herald on Sunday stating that the undersigned would, on "account of giving up driving for automobiling," sell a pair of matched road horses with Speedway records, together with a pneumatic tired runabout, harness and other paraphernalia for the proverbial song.

"Goggled fools in motors" is what The Tribune calls automobilists, in weak imitation of Kipling. From which it may safely be inferred that when motor vehicles are in question The Tribune takes on a "yellow" hue.





On Saturday an innocent woman was nearly killed in the public streets of New York by a gang of hoodlums whose sole excuse for the attack which culminated in her being knocked insensible by one of the missiles hurled at her was that she was riding in an automobile. It is almost impossible to believe that for this and for no other reason an inoffensive woman should be subject to a deadly assault, from which she only luckily escaped with her life. To the New York Times and its disreputable journalistic and judiciary associates is this outrage almost entirely due. The riff-raff guilty of this assault probably would never have thought of making it if the Times and the saffronic papers with which it has allied itself in its unceasing and unreasoning attacks upon the automobile and all connected with it had not constantly sought to convev the idea that those who own and those who use automobiles are human beings totally devoid of any thought of the safety of others, and therefore something which the hand of every man should be raised against without reference to law or order. Having this doctrine blatantly taught by the press and demagogically preached by the Yonkers and police magistrate type of judiciary, it is not to be wondered at that the lawless element has been quick to act upon the advice of its illustrious instigators.

I trust the editor of the Times, Judge Kellogg, of Yonkers, a number of blatherskitish magistrates and the jackals of gutter journalism whose collective rantings are directly blamable for this outrage are proud of their pupils and the aptitude they have shown in learning the lessons of lawlessness taught them by their alleged betters. It is some satisfaction, however, that the husband of the injured woman, himself a sufferer from the same attack, proceeded against one of the alleged mob, whose patron saint, the devil, inadvertently failed to protect him at the critical moment of his attempted escape, thereby permitting his capture, and had him "sent up" for a term of three months.

There once was a woman—a wicked woman, too, if we believe all the stories told about her—whose neighbors sought to convert her by stoning her to death. As the poor creature was about to be thus taught how much her sins had outraged the kindly souls of those who stood ready to beat her to death with stones, the Saviour appeared upon the scene and bade the assemblage of stone throwers to stay their hands until those among them who were without sin had been allowed to cast the first stone at the repentant Magdalen. Not a new story, you will say; no, nor a pleasant one, either; but I could not help thinking of it when I

read the report of the Automobile Club's committee which had just thrown a few paying stones of punishment at three of their fellow members adjudged guilty of scorching. I believe in the advisability of doing just what the club did, but I'll be hanged if I can see how the club ever managed to get a committee the members comprising which were themselves free from offences in the very same direction that they stoned their fellow members for being guilty of!

. . .

Here in New York owners of automobiles have for some time been "forgetting" them in the public thoroughfares, allowing the vehicles to remain unclaimed until the police were forced to lock the ownerless horseless up until the returning memory of the owner caused him to claim it. Out in Detroit either the police are not so observing as they are in New York or else the thieves are more observing, because I see that a man who failed to take his automobile into a theatre with him when he went in to see the show eventually emerged from the temple of Thespis to find that some sensitive soul had taken pity upon the poor, neglected automobile and had kindly removed it elsewherejust where the ex-owner is now vainly en-

deavoring to discover.

I can hardly believe that Mr. Winthrop E. Scarritt, president of the American Automobile Association, could have been correctly reported when he is quoted as saying, in response to an inquiry, what action the A. A. A. would take where a member of one of the clubs affiliated with the A. A. A. had been disciplined by the club for violating the rules of the club or the laws of the State. Mr. Scarritt is alleged by the report to have replied: "You can rest assured that there will be no suspension without the approval of the A. A. A. executive committee." If Mr. Scarritt really said that, he had better issue a revised edition at the very earliest opportunity, or else be prepared to find himself compelled to eat large and unsavory slices of humble pie.

There is no such thing as an individual membership in the A. A. A. The individual becomes a member of the organization solely by and through his club membership. When, therefore, for any discreditable reason he loses his club membership, then, ipso facto, he should lose his membership in the A, A, A. This, too, without any other than the compuls.ry approval of the A. A. A. or any committee connected therewith. It is always fair to assume that a club composed supposedly of those best acquainted with the eligibility and desirability of those composing its membership is the best possible judge of the guilt of any one convicted by it of offences sufficiently grave to warrant punishment by suspension or expulsion. For any outside committee of an organization with which the disciplining club is affiliated to arrogate to itself the right to act as a court of final appeal would be for such a committee to declare itself in need of a dose of the

٠. د same kind of medicine which had been prescribed for the guilty club member. As I said before, I can hardly believe that Mr. Scarritt meant what his quoted words imply, but, whether he did or did not, I would advise him as a friend and well wisher to carefully study the history of the League of American Wheelmen. In this very interesting history he will find a mine of valuable experiences, very many of which he can turn to advantage in shaping his course in his present position. Among other things, he will find that an attempt was made by the officials of the League to act just as he is said to be inclined to do, and the League officials mighty quickly regretted doing so, just as Mr. Scarritt will regret if he ever attempts to put this returning board idea of his into practice.

Did you ever study the poor, downtrodden workingman? You know the kind I meanthe noble, stalwart individual that the Hurst organs delight to picture as confronting the decrepit, disgusting looking millionaire that employs him! If you have never studied this generous, kindly individual you can have no idea of what a hard lot his is, nor of how forbearing and uncomplaining the poor, downtrodden one is. I'll give you a sample of how he suffers in silence and submits without complaint. A concern just across the North River have for some time been building automobiles of the heavy type, believing that the greatest future of the motor vehicle lay in the direction of its utilitarian possibilities, rather than in its sporting attributes. The concern were content to keep their men working at a loss so as to be prepared for the arrival of the time when the mercantile interests of the country would finally awake to the desirability of the new delivery wagon. Did the downtrodden workingman complain of his hard lot in being forced each Saturday to take the wage which was paid him by the employers who had not profited by his labors? Not much he didn't; you see, that's part of his downtrodden training.

Unexpectedly one of New York's merchant princes, more progressive than his competitors, determined to replace horses with motors. The result was, the concern which had long awaited the turning of the tide found itself with an order for a dozen big delivery wagons, with the promise that if these were a success the order would be increased to a hundred. Did the downtrodden workingman rejoice at the tardy arrival of the time when his work was to bring some profit to those who had long employed him at a loss to themselves? Well, I don't think he did! No, indeed; he and his fellows promptly struck! The result was, the big merchant, finding himself confronted with a labor entanglement which no one could foresee the end of, cancelled his order for the vehicles, and the downtrodden workingman had won another "victory" over the villanous capitalist who employed him!

THE COMMENTATOR.



TO PREVENT SPEEDING

Chicago Club Committee Makes Rules for This Purpose—Large Entry List Presaged.

Even at this early day much interest is being displayed in the forthcoming 100-mile endurance contest of the Chicago Automobile Club, which is to take place on July 12. The committee having the affair in charge believe that the inquiries received and the promises made presage an entry list of at least seventy-five vehicles.

Particular attention has been given to the solving of the vexed problem of preventing excessive or illegal speeding. It is proposed to establish six control points on the course, commencing at fifteen miles for the start, and at regular intervals at fifteen miles up to ninety miles. From the ninety miles, or

ask on the entry blank, or, in other words, we request that each entry binds himself upon 'his honor' not to conscientiously exceed the speed limit or pass the control points before the specified time. We feel that placing a man upon 'his honor' is more to him than a mere disqualification or a few dollars penalty."

Affirmed Adverse Verdict.

Action was brought a short time ago in the Supreme Court, Nassau County, this State, by Charles W. Knight, who recovered a verdict against J. F. D. Lanier for \$200 for frightening his horse. An appeal was taken by Lanier from such determination to the Appellate Division in the Second Department, which tribunal has affirmed the action of the court below.

Justice Hirschberger, in his opinion affirming the judgment of the trial court, says:

"The negligence of the defendant, if any,

CARRIES A "GUN"

Does Long Island Man, and Says He Will Shoot at Speeding Automobilists.

There's trouble brewing over on Long Island—trouble with a big T. Automobilists are no longer to have a monopoly of law-breaking or to be permitted to maim and kill people without opposition or rivalry. This is a game that two can play at, as will be spedily shown.

Heedful of the hint of the Times and other "yellow" journals that a bunet can travel faster than an automobile, sundry residents of Long Island have provided themselves with "guns," which they propose to use with precision and dispatch on obstreperous automobilists whom they may encounter. With White Devils and Red Demons travelling at



VIEWING THE CHICAGO COURSE.

the sixth control point, to the finish will only be ten miles.

"We will time it in this way." writes Chairman Croninger: "That from the start to the first control point, fifteen miles, a driver will not be allowed to cover this inside of one hour and fifteen minutes, and the following fifteen mile control points he can cover in one hour each: then, from the sixth control point to the finish, or ten miles, we will require him to take one hour to cover this distance, making a total of seven hours and fifteen minutes for the entire course. In addition to this, between each control point, at five miles and at ten miles, will appear a banner designating these distances. With such a perfectly marked course there is no excuse whatever for any criver to exceed the speed limit under any circumstances.

"We gave the thought of a penalty for fast drivers much study, and while we will disqualify any man who passes even one control point before the specified time, yet we

must obviously be predicated upon the act of starting the machine again when the plaintiff was in plain peril. He says, and his companion corroborates him, that the plaintiff beckoned him to do so. The plaintiff and his witnesses assert that no such sign was given, and that nothing was said except that at the time the horse became fractious the plaintiff shouted: 'For God's sake, stop that machine and let us get out before you kill us all!' He further testified that immediately after the accident the defendant said: 'I am awful sorry; I ought not to have started up.' This the defendant did not deny except as his story may in itself involve a denial. Under the circumstance the question of negligence, assuming that care was due, was one of fact, and it cannot be said that the conclusion reached by the jury is without support."

Decker & Hinckley, Owego, N. Y., have built one gasolene automobile and have started work on two more. the rate of 75 miles an hour, as they do habitually, there will not be much time for thought. Perhaps the popular way will be to puncture a tire with the first shot, and then to bore a hole through the diaphram of the operator or owner preliminary to asking him what the devil he means by misusing the public highway.

"You see, we have got to do something to protect ourselves," said one of these blood-thirsty gentlemen, a horseman, of course, who never drives his fast trotter at a better gait than the lawful eight miles an hour. "As things are we are afraid to venture on certain roads for fear of being run down or forced into the ditch. The situation has become intolerable.

"So, several of us have proved ourselves with little 'barkers' for use when our rights are trampled on. Oh, it's no use appealing to the law. We've got to be the law ourselves. So I carry my 'gun' here"—tapping a pocket significantly—"and am ready to use it whenever it becomes necessary."

HAD TWO MISFORTUNES

He was Wealthy and an Automobilist—So the Jury "Soaked" Him

The softness of heart of the average juryman is proverbial. When the poor man is pitted against the rich man, with the aforesaid juryman as the arbiter, it nearly always goes hard with the latter. But when, in addition to being wealthy, the accused is also an automobilist, the result is almost a foregone conclusion.

It is not altogether surprising, therefore, that E. R. Thomas was last week mulcted in damages to the tune of \$3,125. This amount was awarded to Frank E. Thies, whose son, Henry, seven years old, was run over and killed in Convent avenue on Lincoln's Birthday by the automobile driven by Thomas.

Justice Freedman, before whom, in the Supreme Court of this State, the case was tried, in his charge to the jury defined the law and the rights and privileges of the pedestrian and vehicle driver, respectively, at considerable length. The salient points of his charge were as follows:

"Being or playing upon a street is not of itself contributory negligence in such a child, but, whether it was not in this case, in the condition of the street in question at the time, it is for you to say. So a mere error of judgment on the part of the deceased was not of itself contributory negligence. If the automobile in question came upon the deceased under circumstances calculated to produce fright or terror, and such fright or terror was produced thereby, and this caused an error of judgment by which the boy ran in front of the automobile, the error was not contributory negligence.

"It is claimed by the plaintiff that the automobile at the time was run at an excessive speed. But that is not the most important point. The mere rate of speed, whether high or low, lawful or unlawful, is immaterial unless it entered into the cause of the accident. In the case at bar there is not even any evidence showing what the lawful rate of speed is for an automobile. An automobile has the same duties to perform when meeting pedestrians or other vehicles in the streets of this city that other vehicles are subjected to.

"No owner or operator of an automobile is exempt from liability for a collision in a public street by simply showing that at the time of the accident he did not run at a rate of speed exceeding the limit allowed by law or the ordinances.

"On the contrary, no matter how great the rate of speed may be which the law and the ordinances permit, as a general rule—although in this case there is no evidence—he still remains bound to anticipate that he may meet persons at any point in a public street, and he must keep a proper lookout for them and keep his machine under such

control as will enable him to avoid a collision with another person also using proper care and caution.

"If necessary he must slow up and even stop. No blowing of a horn or of a whistle, nor the ringing of a bell or gong, without an attempt to lower speed, is sufficient if the circumstances at a given point demand that the speed should be slackened or the machine be stopped, and such a course is practicable, or, in the exercise of ordinary care and caution, proportionate to the circumstances, should have been practicable

"The true test is that he must use all the care and caution which a careful and prudent driver would have exercised under the same circumstances.

"On the other hand, every such operator of an automobile has the right to assume and to act upon the assumption that every person whom he meets will also exercise ordinary care and caution according to the circumstances and will not negligently or recklessly expose himself to danger, but rather make an attempt to avoid it.

"It is only when such an operator has had time to realize, or by the exercise of a proper lookout should have realized, that a person whom he meets is in a somewhat helpless condition or in a position of disadvantage and therefore seemingly unable to avoid the coming automobile that the operator is required to exercise increased exertion to avoid a collision. This applies peculiarly when children of tender years are met."

To judge from the verdict, the jury appears to have taken to heart that portion of Justice Freedman's charge relating to the operator's responsibilities and completely ignored what he said about the pedestrian's. They seem to have believed that the unfortunate child was using "proper care and caution" to avoid injury when struck, which is, of course, contrary to the evidence and the facts.

It will come as a surprise to many people to learn that the use by children of crowded city streets as playgrounds is right and proper, and therefore legal. The common impression is very different.

Want a ten Year Franchise.

A representative of the Chicago Motor Vehicle Co. was before the Beatrice (Neb.) City Council last week and made a proposition for the running of motor vehicles there. He wanted a ten year franchise and the right to operate cars on the old street car tracks. The Mayor stated that the company will be granted a franchise, provided it pays to the city 1 per cent of the gross earnings.

Tries to get Away From Explosives.

Professor Birkeland, who two years ago was sent by his government to Northern Norway to study magnetism, the aurora borealis and cloud fermations, is engaged in the construction of a cannon with electromagnetism as the motive power in place of explosives. A small model of the invention throws projectiles weighing a pound with great force.

ELECTRIC IGNITION'S AGE

Fifty Years Ago it Figured in the Patent Records —Some Inventors, Work.

"Most people would probably be surprised if you informed them that electric ignition for internal combustion motors was nearly fifty years old, and that the sparking plug was well over forty." These facts are nevertheless true, as the following brief extracts from early patents will prove:

In a patent dated March 1, 1853, R. L. Bolton, an Englishman, proposed to effect the explosion by spongy platinum, but prefers to employ sparks of electricity or galvanism. In this case he recommends that one of the conducting wires should be in unbroken connection with the battery, the other being an alternating conductor rising through the exploder and dipping by a curve into a vessel of mercury.

Messrs, Barsanti and Matteucci applied for several patents embodying electric ignition. Their first is dated May 13, 1854. They used a motor having two cylinders, whose pistons moved in opposite directions. The explosion was obtained by an electric spark caused by the ascent of the piston. This suggests the devices subsequently employed by Pennington and Mors. About three years later the same inventors describe how they obtained a spark from a small cylindrical circuit breaker running against a steel spring. The circuit breaker was rotated by a hand and pulleys from the flywheel shaft. The completion of the circuit was timed relatively to the valve gear. The current was obtained from a Bunsen battery and de la Rive's multiplier.

A few days later J. D. S. Roussellot patented a motor of the hot air type, the heat being obtained by an oxyhydrogen flame, the gases for which were generated from water by a magneto electric machine. The engine comprised a "dilating vessel," in which the expansion of the air took place, and the gas in this vessel was fired by an electric spark passing between the platinum wire points in front of a gas jet. The same inventor employed wire gauze partitions and a small cylinder filled with sand to avoid back fires.

The well known name of Lenoir is the next to come to the front, early in 1860. This inventor seems to have had pretty clear ideas on the internal combustion motor even at that date. His invention consists in the application and use of an inflammable gas mixed with a proper proportion of atmospheric air, and ignited inside a cylinder by the aid of electricity, the expansion thereby produced acting upon the piston and imparting motion thereto, which motion might be transmitted in any convenient and well known manner to a driving shaft. Atmospheric air is admitted into the cylinder, and along therewith a supply of inflammable gas or vapor. Inside the cylinder are fitted,



either at the middle or at both ends thereof, one or more pairs of insulated platinum or other wires in connection with a battery, and so disposed that an electric spark will be produced which instantly ignites the mixture of air and gas contained in the cylinder on one side of the piston, and by the expansion of the air so produced forces the piston to the other end of the cylinder. The supply of gas is regulated by a suitable stop cock and governor. A "director" is used to complete the electric circuit at the proper times. It consists of a wheel commutator on the flywheel shaft, the metallic segments of which are suitably connected with a Ruhm-

In less than a year afterward M. Lenoir conceived the idea of the porcelain sparking plug. In describing certain improvements in his former invention he refers to two electric igniters, one at each end of the cylinder. The two wires forming one igniter are placed in a porcelain or other suitable non-conducting rod, which is fixed inside a metal plug screwed into the cylinder cover.

korff coil, and with the above mentioned

platinum wires.

In connection with these plugs he employed a metal slide carried by the crosshead of the piston rod, and making electrical contact with certain insulated plates, which were respectively connected with the plugs; so that the circuit was completed and a spark produced in each end of the cylinder alternately, so as to explode the gas and air which had been sucked in by the piston at the commencement of its stroke when under the influence only of the flywheel. The electric force required to produce the sparks was again preferably obtained from a Ruhmkorff coil.

At the end of the same year, 1861, Messrs. Barsanti and Matteucci described means for producing the electric spark by a Ruhmkorff battery, one of the rheophores of which surrounds the engine. Opposite the extremity of each piston rod is a circuit breaker, generally closed by an insulated metallic ring. If one of the pistons drew too heavy a charge the ring advanced more than usual and broke the circuit, so that no current would pass, and the charge was not ignited.

In 1863 A. N. Otto describes a system of ignition comprising two insulated wires arranged near the end of the cylinder in connection with a galvanic battery. One of these wires is connected to the engine and the other to an insulated spring, with which a projection on the main shaft of the engine comes into contact at each revolution. When the said contact is made an electric spark is produced in the cylinder and the mixture exploded.

In October, 1865, A. D. Cherfils patented a two or three cylinder motor with an optional stroke. The mixture is ignited by means of two Bunsen elements with a strong Ruhmkorff coil. The circuit is made and broken by copper wires carried by small vectors on eccentrics.

In the land of the ox cart the wheelbarrow is king.

CAPITAL AND EXPERIENCE

How Important They are in the Automobile Business Made Very Plain.

"One of the drawbacks of the automobile industry in France is a want of capital," says a keen observer of events in that country. "This is felt more sharply by the inventor who has patents to sell than by the small manufacturer, who is generally able to at least make a profit with his limited resources; but even he finds that Fortune will not smile upon him unless he can get sufficient capital to develop his business, and somehow the money which may be useful in other directions has a curious habit of going to big and flourishing concerns which have no particular need of it.

"In times past, when buyers expected to pay a big price for their cars, the question of productive cost was only of secondary importance, and makers contented themselves with gradually extending their works, though they were still disposed to limit expenditure on new plant for fear that the demand for their particular vehicles would not be maintained long enough to warrant them in largely increasing their productive capabilities.

"Of late years, however, the situation has changed to such an extent that all the makers have been going in for big plants, and they find that not only is the demand rapidly increasing, but that the reduced cost of manufacture is bringing them in much larger profits. As a necessary consequence of this state of things the prices of vehicles have been lowered; at the same time their quality, as represented by their greater reliability, has been improved. The turning out of motors and gears in series of several hundreds by the aid of the most modern machinery has allowed of their being made to absolutely exact measurement, and as they are more accurately fitted the vehicles run more smoothly and more satisfactorily, and consequently fast much longer.

"All this has been done by specializing the different parts of the motor vehicle and employing the best possible machinery, and as the big firms possess such an enormous advantage it is not surprising that the small maker finds it difficult to compete with them.

"After all, the quality of an automobile lies not so much in the system as in the workmanship and material, and in the experience which enables makers to perfect little details, and there are many systems which would doubtless give excellent results if only the manufacturer were able to turn cars out under the same conditions as the big firms. There are several makers who started building motor cars that for a long time failed to secure the favor of the public, but, having plenty of capital at their back, they continued to improve and gain experi-

ence until their machines have now acquired a remarkable pipularity. Others would undoubtedly have passed through a similar experience if they had not been stopped during their early failures by want of funds.

"The automobile industry is not a close one, and is not necessarily confined to a comparatively few firms building cars upon systems which are believed to be superior because they give superior results. There is no hard and fast principle in automobile construction, except the one that the simplest is generally the best, and if makers are able to pay for experience as well as for the plant which will enable them to turn out the machine cheaply and well, there is no reason why the industry should not be uniformly prosperous.

"But, unfortunately, capitalists are not always ready to pay for experience, even when there is an excellent chance of getting a good return later on."

A Spark That Can be Seen.

A new plug named the "Seer" has been patented in England. In it the usual porcelain insulation is replaced by one of a specially annealed glass, similar to that used for chimneys for incandescent gas lights. By the use of glass in place of porcelain the condition of the spark under working conditions can always be noted, an advantage which cannot be lightly passed over. The body of the plug is of the usual De Dion type, so that it may be used in any engine fitted with such a plug. The new plug should last well, as the glass used will withstand high pressures and temperatures. There is no fear of a loss of compression, as the glass is well packed into the body, and the central wire fused into the glass in the process of manufacture.

Expecting too Much.

"It is hardly fair," says an advocate of the explosive motor, "to expect a gasolene vehicle having an engine which has but one impulse in two revolutions to do what a steam driven vehicles does with its engine having four or eight impulses in the same time, nor must it be forgotten that even steam vehicles sometimes are backed up before starting ahead. I have seen locomotives whose engineer took up the slack in the car couplers before starting ahead when heavily loaded."

The Week's Exports.

British Possessions in Africa—3 cases auto mchs., \$75.

Argentine Republic-9 cases motor vehicles and parts, \$2,621.

Copenhagen—7 cases motor vehicles and parts, \$2,285.

Cuba-2 cases auto material. \$23.

Hamburg-14 cases auto vehicles, \$4,325.

Havre-2 cases auto mch., \$181.

London-29 cases motor vehicles and parts, \$41,222.

Southampton-2 cases motor vehicles, \$1,500.

RECHARGING ACCUMULATORS

An English Idea in a Patent Rectifier—Transformer and Polarized Relay.

An appliance has been brought out in England by the aid of which an accumulator can be recharged from an alternating current. It is called the "Batten patent rectifier," and appears to be a very ingenious device. It is thus described:

"This apparatus is a polarized relay, whose tengue moves synchronously with the alternations of the current, and sends unidirectional impulses into either of two paths, which it opens for itself, and is independent of alterations of frequency or voltage. It will work with a much lower percentage of wasted energy than would result from doing the same work on a direct current circuit through charging lamps. It will start at once at full load, without speeding up, with-

nets exactly in synchronism with the alternations of the current energizing them.

"In order to make use of these oscillations to convert alternating current into unidirectional or direct current, the armature is made with a contact piece of silver, which at the end of its movement makes contact with twin stops.

"The alternating current from the secondary of the transformer traverses the armature and contact piece and passes on through any circuit connecting these stops to the return lead of the secondary of the transformer. When the current is passing through the electro-magnets in the positive direction the armature carrying the transformed current will always be attracted to the same side, and will make contact with the same stop; during the next fraction of a second, when the current has changed its direction to the negative, the armature will move over to the other side and make contact with the other stop. These stops will therefore each receive impulses of one kind only, and these impulses can be carried through an electric

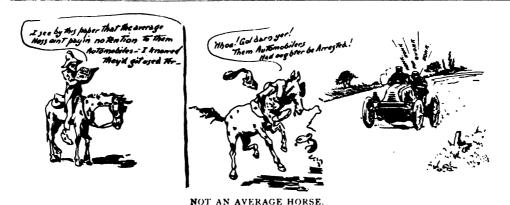
HOW THEY VIEW IT

Committee of Fifty Regard Pedestrians as Targets for Automobilists—An Example.

Anything more asinine than one of the lines of argument presented by the committee of fifty appointed as a result of the opposition developed in a local political club to an increase of the legal rate of speed of automobiles from eight to ten miles per hour, it would not be easy to conceive.

If this increase is voted by the Board of Aldermen, says the committee's spokesman, the committee will "demand a hearing before Mayor Low and seek to have the measure defeated by a veto in the last stage of the process of enactment into law.

"At this hearing, if need be for it, there will likely be brought out how serious a change the shift from an eight to a ten mile an hour limit really is. At the proposed rate a vehicle would cover a mile in 6 min-



out expert attendance, and without delicate mechanical starting devices. It will carry six amperes at 50 volts, and a larger current at lower voltages.

"The apparatus is formed of a step-down transformer and a polarized relay, which consists essentially of one or more electromagnets, and of a polarized armature carrying a contact piece. The armature is free to move or rotate through a small angle on its pivot, and is polarized by means of two permanent magnets, the two similar (say, south) poles of which are touching one another. By means of two soft iron studs these convey their magnetism up to the centre of the soft iron armature, and induce a consequent north pole there, with the result that the two ends of the armature become south poles and do not change their polarity.

"If an alternating current is passed through the electro-magnet it produces alternating magnetism in its ends; that is to say, the magnetic polarity changes rapidly north and south. They will therefore alternately attract and repel the ends of the armature, where the magnetism remains constant, and the armature will oscillate backward and forward between the poles of the electro-mag-

circuit where work is to be done; thus, instead of an alternating current, two unidirectional or direct current circuits are obtained."

To Aid in Starting.

"I would advise those who object to starting the engine by hand power to install one of the starting devices which are being successfully used on stationary engines," says a user of the latter.

"A compressed air tank and compressing pump driven from the flywheel of the engine, together with a proper charging and discharging valve, will enable the driver to start the engine from the seat after he gets into the vehicle by means of compressed air, and when the engine has reached its normal speed he can then start the vehicle.

"I believe that it is possible to so design a gasolene driven vehicle as to start both it and the engine from rest at the same time by the use of compressed air in a three-cylinder engine, the compressed air tank being charged from the flywheel or other rotating part of the carriage while it is coasting. This device may add more volume and weight than the user of a light vehicle may desire, but could be quite easily effected in a touring carriage or a heavy vehicle."

utes, a city block in 18 seconds, as against a mile in 7½ minutes and a block in 22½ seconds, as now allowed. The pedestrian going four miles an hour, and that is fairly fast work, needs over 17 seconds to walk a hundred feet—the width of one of the avenues from curb to curb. As it is now, in other words, the autocar must be within the block to put the pedestrian in peril; the increase of the limit would move the danger line beyond the block and put it, to all intents and purposes, the other side of the next cross street, making it practically necessary for pedestrians to run across avenues."

Apparently the committee believes that the object of the operator of the approaching automobile is to hit the particular pedestrian he has selected for his target. Anywhere between the two curbs the pedestrian is fair game and can be struck at will. His only hope of safety lies in his sprinting across the street and reaching the curb on the other side before the automobile can get within striking distance.

It is small wonder that the men who can make such puerile objections as these raise the plea that it is impossible to secure the enforcement of laws in this city. If such



were the case they would not care a picayune whether the present ordinance was changed or not. But consistency is not one of their strong points.

To Keep Boilers in Good Order.

It has been frequently remarked that if regularly blown down the small multitubular boilers used on automobiles do not "fur up," though almost every practical man who sees them for the first time, but who has no knowledge of the working of such small boilers, will suggest that one of the first troubles will be due to scale deposits.

In this connection it is interesting to refer to the examination of a boiler of this kind which was known to be at least three years old. The boiler was taken out, and, as now usual for such examinations, a small electric lamp put into it. There was no trace of scale in the boiler, but both the water leads from the bottom of the boiler were almost completely choked up. It is thought that the choking of the water pipes was due to the fact that the car had been very badly treated and hardly ever blown down.

This blowing down is an extremely simple process, and merely amounts to this: When the car is brought in and the burner turned off the boiler pressure is allowed to fall to 50 pounds to the square inch. The blowingout cock is then opened. This is a tap at the bottom of the boiler, and when it is opened the water is all blown out of the boiler, and with it any sediment or deposit which may be inside the generator, and which if left for any length of time would cause a scale or fur to form on the tube plate and tubes of the boiler, not only corroding them, but also greatly reducing the steaming powers of the boiler, as the efficiency of the heating surface is greatly reduced by scale. Some careful users blow down their boilers after every day's work. but others content themselves by doing it twice a week.

The satisfactory behavior of these small boilers is in many respects a proof that experience on a larger scale is often misleading, for, as has been said, the average man who has practical knowledge of the working of larger boilers condemns the small ones used on the light steam cars, and no one is more surprised than he when he finds how well they stand work and wear so long as they are properly treated.

Wanted, an Owner.

Rather an odd dilemma confronts Columbia Commandery No. 2. Knights Templar, Washington, D. C. The commandery recently held a fair, and one of its attractions was the chancing off of an automobile. Ticket No. 1,608 was drawn, but the name of the holder was written so illegibly that the members of the committee could not decipher it.

The signature appears to be that of A. Hunter or A. Hurt. The members of the commandery desire that the holder of the ticket shall come forward and present the stub he holds, and the automobile will be turned over to him.

TOLD OF TELL'S COUNTRY

A Witty Clubman Relates a Tale of Scientific Tipping Experiences.

Up to within a year the attitude of the Swiss Government and people has been distinctly antagonistic to the automobile. Recently the acquisitive Switzer has concluded that the automobilist was only one more touring pigeon created for the sole purpose of being plucked of his financial plumage by the aforesaid Switzer, and consequently the Switzer now is distinctly pro-automobile.

Among one of the first to tour through this beautiful land above the clouds after the change in the attitude of the Swiss was a member of the automobile club who is famous for his ability to first see a joke and then to tell it to others in such a manner as to make it doubly interesting. Telling the story of his experience in passing through the home country of the late Mr. Tell the clubman says:

"I haven't any fault to find with touring through Switzerland so far as the roads, the scenery or the civility of its inhabitants are concerned, but when it came to paying for it all in tips, then I do kick, though what good that does I don't know. Of course, all over Europe every one must tip, and the automobilist perhaps a bit more than any other traveller. That is what he has to pay for being different from the ordinary traveller and for the reputation of being a millionaire, which is everywhere attached to the employment of an automobile as a touring conveyance. But when you enter Switzerland, oh, my! On the topmost peak of the highest mountain there should be painted in letters large enough for every traveller to read from afar: 'Abandon all hope (of escaping with any money) ye who enter here.'

"It wasn't necessary for me to be told that I was 'A' in the alphabet of good things when I passed over the border and faced toward the snowcapped peaks, whose terrestial eruptions constituted Mr. Tell's native land. By some sort of wireless telegraphy unknown to all save the scientific tip extractor, I was passed along the lines as a soft mark, and at Chamouni, when I got ready to leave the territory, a last grab was made at me.

"I had feed the chambermaid, the waiter, the porter, the bootblack, the cook, the omnibus driver, the mail carrier and all the bellboys, when the landlord approached and intimated that he had been left out in the cold.

"'But I was your guest,' I protested.

"That is true,' he replied, 'but, if you will remember, I received you with three distinct bows, where only one is required by custom, It is two bows extra, monsieur.'

"I paid 10 cents apiece for the extra bows, and was stopped by a little old man who introduced himself as the coroner of the capton.

- " 'But where do you come in?' I asked.
- "'Had monsieur met with a fatal accident with his automobile, I should have held the inquest,' he replied.
- "I gave him a franc for not holding an inquest on me, and his clerk then stepped forward and said:
- "'And had there been an inquest I should have had the pleasure of writing to monsieur's relatives that he was dead.'
- "I handed him the same amount for his loss of pleasure, and then asked if there was anybody else in Chamouni who had a claim on me.
- "'The police have not arrested you,' suggested the landlord.
- "'All right-here's a tip for them. Any one else?"
- "'My night watchman did not let the hotel take fire from the dangerous spirit in the tanks of monsieur's automobile.
 - "'All right again.'
 - "'And my wife, monsieur.'
 - "'Well, what of your wife?'
- "'She has presented me with a son during your stay in my house.'
- "'And what have I to do with that?"
- "Why, monsieur, is it not worth a little fee to you that she did not present me with two sons at the same time?"

"I thought it was, and left a franc for her, and then, as they could think of nothing else, I went down and tipped all the railway officials and finally got out of the country with the carriage and a vivid recollection of the most scientific and aggressive tip extractors that I have ever met, and I have been twice around the world at that."

About the Worst yet.

Absurdity is the most marked characteristic of an ordinance recently introduced in the Indianapolis (Ind.) City Council. Although supposed to have had its origin in a feeling against automobiles, it is so drafted that it applies to all vehicles, and provides that speed shall be reduced to "a walk" at the intersection of all streets.

The ordinance is as follows:

Section 1. Be it ordained by the Common Council of the city of Indianapolis, Indiana, That it shall be unlawful for any one to ride, lead or drive a horse or other animal, or to ride, drive or propel any bicycle or other vehicle run, operated or driven by steam, electricity or other motive power, over or across the intersection of any street or streets, or to enter or leave any alley or driveway, from or to any streets within a certain designated portion of the streets of the city of Indianapolis at a galt or limit of speed faster than a walk.

Sec. 2. The portion of the streets to be thus set aside under the provisions of this ordinance shall be as follows, to wit: All those streets, alleys and driveways and portions of streets, alleys and driveways included between the north line of Ohio street and the south line of Georgia street, the west line of Senate avenue and the east line of Alabama street.

Sec. 3. Any person violating any provision of this ordinance shall, on conviction before the police judge of said city, be fined in any sum not exceeding fifty (\$50) dollars for such offence, to which may be added imprison-

ment for not more than thirty (30) days.

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MERCEDES-SIMPLEX

Features Which Distinguish its Engine Described in Detail—The Silencer Dissected.

To many motor vehicle users the engine is the part which surpasses everything in importance. That of the Mercedes-Simplex possesses many novel features, the excellence of which, or the reverse, may be judged by the accompanying description. The engine under notice is that employed to drive the new racing car of A. C. Harmsworth, which is now in England and has been placed at the disposal of all interested in this latest type of the famous Cannstatt firm. Says the Autocar:

The engine, which is nominally 40 horsepower, has four cylinders, each 118 mm. be controlled by the governor, which causes the variation to synchronize with the action of the throttle in the carburetter.

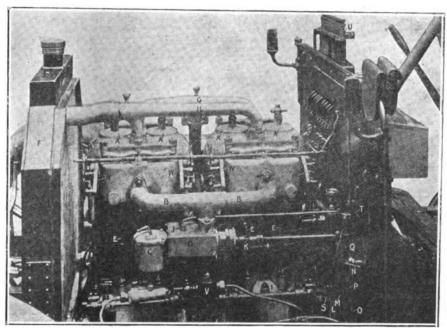
The Cannstatt people, who were down at Nice with the car, were originally responsible for this statement, and it was generally accepted, but it appears necessary to take some of their claims with a pinch of salt, for, not seeing any advantage in throttling the mixture in two places, the lift of the valves with the governor sleeve in different positions was measured, with the result that no variation could be discovered, and Mr. Harmsworth's engineer (who, feeling wroth at being misled, readily undertook to remove the cover and examine the mechanism at the first opportunity) says that the admission valves were simply operated by plain cams giving a constant lift.

The ignition cams, which move the rods operating the make and break device in the

and the end of the lever H comes in contact with the lever F, and as the spring I is sufficiently strong to overcome the spring G, the spindle J is rocked and the contact broken in the cylinder.

The carburetter is placed fairly high, thus permitting the use of short induction pipes. The vaporizer consists of horizontal tubes, into which the spray nozzle projects vertically. This tube is surrounded by a rectangular box, which is fed with hot air from a casing round the exhaust pipe, and the hot air has a free passage into the tube and past the nipple, after which the mixture passes by a vertical branch into the induction pipe.

Cold air from the other end of the horizontal tube passes through the cylindrical sleeve, which forms the throttle valve, and dilutes the mixture as it passes into the vertical branch leading to the induction pipe. When the throttle valve sleeve is moved



ADMISSION SIDE OF MERCEDES ENGINE.

bore, with the stroke 150 mm. The cylinders are cast in pairs, as will be seen from the figures 1 and 2. No attempt is made to use aluminum for the water jackets, but as these only extend a very short distance down the cylinders very little saving of weight could be looked for in that direction. Referring to figure 1, which shows the admission valve side, the method of actuating the admission valves will be clearly seen. The cam shaft passes right along the side of the engine, the cams being covered by the caps I I. The valves themselves, whose stems project vertically downward over the cam shaft, are lifted by the same method as that usually employed to actuate exhaust valves when no cut out governor is used. The valves have flat seats of 50 mm. diameter.

Although it is by no means a new idea to actuate the admission valves, the method adoing so in this particular car excited a good deal of interest by reason of the fact that their lift is stated to be variable, and to

cylinder, are not encased, and the lower ends of the rods are guided by swing links carried from the ends of short levers on the small way shaft R. By rocking this way shaft, which is connected to a lever on the steering wheel, the lower ends of the rods are moved in a plane at right angles to the cam shafts, thus causing the cams to lift the rods earlier or later in the stroke.

Figure 3 shows the flange, which is bolted on to the cylinder head, and which carries the make and break arrangement. The plug C is connected with a live wire from the magneto, and is insulated from the plate A by porcelain bushes. The dotted lever E, whose end is normally in contact with C, is capable of rotation about the spindle J, and when the contact is broken a low tension or wipe spark takes place at C. The spindle J is rocked by the lever F F on its end, which in its turn is moved by the lever H. The lever H is normally held up by the rod from the cams, but at the firing point this falls,

along by the governor or the hand lever on the steering wheel it reduces the area of the vertical branch, and at the same time reduces the cold air supply, thus increasing the richness of the mixture. An adjustable stop J is fitted over the nozzle, and it is connected to a lever on the dashboard, by which its height can be varied. This stop has a function similar to that on the carburetter of a De Dion volturette, and regulates the amount of oil flowing from the nozzle.

On the exhaust side of the engine, which is shown in figure 2, it will be seen that the valve gear is similar to that on the admission side. The exhaust valves themselves are of the same diameter as the admission valves, but have conical seatings, and the lift in both cases is 8 mm. A single exhaust pipe is used, from which it would appear that the makers do not attach much importance to the interference between the exhaust of one cylinder and another. A spur wheel on the middle of the cam shaft drives

the pinion on the magneto shaft, and also the pump, which is of the centrifugal type and of large size.

A valve is fitted in the exhaust pipe just before it reaches the silencer, which can be opened by a lever I' on the dashboard, and allow the exhaust to pass directly into the atmosphere. This was fitted for racing purposes, but when the car was inspected it was opened when the engine was throttled down for quiet running, and from the weakness of the explosions it was clear that the silencer is not entirely responsible for the extremely quiet running of this engine when the car is standing.

The silencer itself, which is at the side of the car between the wheels, is 700 mm. long and 195 mm. diameter. The exhaust pipe projects into it, the end being plugged and the pipe perforated. There are two baffle plates, which divide the silencer up into

OIL AND WATER

Combination of the Two in Explosive Engines Sometimes Proves Beneficial.

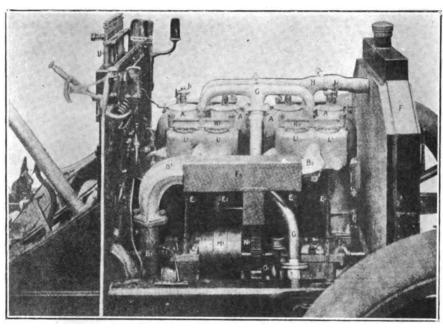
"From time to time attention has been drawn to the advantages claimed for water as a charge constituent in internal combustion engines," says an English mechanical engineer.

"For many years the writer has viewed these claims with favor, and holds that there is quite sufficient affirmative evidence to warrant greater attention being devoted to the subject. In the use of oil the Banki engine tests, as published, showed that the addition of water reduced consumption to .45 pints per b. h. p. per hour. More recently

pression, as an absorber of the violence of explosion, etc.

"To these explanations the writer will now add one that he has lately discovered and has not yet seen offered. During the recent testing of a petrol motor, in which the wall between the water jacket and the cylinder developed porosity, admitting moisture to the combustion chamber, a sudden advance in ignition was observed, together with an increase of exhaust temperature, leading to burning of the valves. On information being given to the writer, he was somewhat perplexed to account for results apparently contrary to what might have been expected. Consideration, however, suggested to him the following explanation:

"Assuming the cylinder charge to be pentane, C₂H₁₂, the addition of water would lead to partial decomposition, carbon combining to carbon monoxide, hydrogen being



EXHAUST SIDE OF MERCEDES ENGINE.

three compartments, and one long pipe passes to the rear of the car.

A, cylinder heads; B, induction pipe; C, float chamber; D, vaporizer; E, induction valve spindles; F, cooler; G, water pipe from pump; H, water pipe to cooler; I, cam shaft casing; J, adjustable stop over nipple; K, throttle valve spindle; I, fork lever to governor sleeve; M, throttle lever; N, nut from hand throttle; O, governor arms; P, governor spring; Q, cam shaft gear wheel; R, way shaft for advance ignition; S, lever for advance ignition: T, cross shaft from levers steering wheel; U, sight feed lubricators; V, reducing valve for pressure feed; W, flanges carrying igniting trip gear.

A, cylinder heads; B', exhaust pipe; C', cam shaft casing; D', pump; E E', exhaust valve spindles; F, cooler; F', hot air box for carburetter; G, water pipe from pump; H, water pipe to cooler; I', exhaust pipe opener; J', compression cocks; K', bridges to hold cups over valves; L', valve cups; M', magnets; N', spur wheel on cam shaft driving magneto pinion; O', magneto pinion; U, sight feed lubricators.

similar results have been demonstrated in the employment of alcohol.

"In an article (January 10, 1902) on 'French Spirit Motors,' Engineering observed: 'In theory, the consumption of spirits for an equal power is 1.8 times the consumption of petrol; in practice, however, the presence of water in the spirits increases the elasticity and efficiency of the power, and the proportion is only as 1.25 to 1. . . . It has been asserted, from results of tests carried out in Germany, that the efficiency of spirit motors is 23 per cent against 15 per cent for petroleum and 13 per cent for steam engines."

"In general terms, the advantages claimed for the addition of water are: Greater economy, greater elasticity and smoother running. No very complete explanation of these better results has so far been published. The advantages of water have been described as a contribution of mechanical energy in the form of steam, as a cooling agent, obtaining increased charge volume and higher com-

liberated. In other words, water gas would be formed, and would account for the increase in exhaust temperature. The advance in ignition would be due to the greater inflammability of the gas, and may be illustrated thus: The molecular weight of pentane being 72, 256 of oxygen would be required for its perfect combustion. On the other hand, the molecular weight of the water gas, CO + H₄, being 32, the oxygen needed for complete combustion would be 48. One part by weight of pentane, therefore, would require 3.5 O, and one part of water gas only 1.5 O.

"This at once shows why the ignition is advanced, the greater inflammability of the water gas being due to the lesser amount of oxygen wanted for combustion. The probability that, under such circumstances, water gas is formed in the cylinder opens up a new side of the question that certainly deserves careful study."

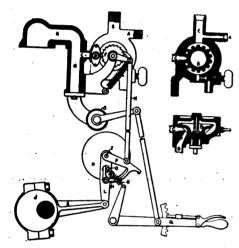
Some motophobes do wrong when they do write to the Times.

DISTRIBUTES THE FUEL

Used on the Gordon-Brille Gasolene Cars and Mechanically Operated.

As being one of the very few French "fuel distributers" or mixing chambers actuated solely by mechanical means, the device employed on the Gordon-Brille cars possesses a certain amount of interest. The accompanying description and illustration will make its construction clear.

The oil or spirit, for petrol or alcohol can be used, is taken in through the pipe A, and enters a chamber in which is a conical rotary member B, with pockets or cavities cut in its face. Each pocket holds the exact quantity of fuel required for one charge. The fuel chamber does not fit closely around the cone B except around the point of interception of the fuel delivery passage C and the incoming air passage D. By means of a me-



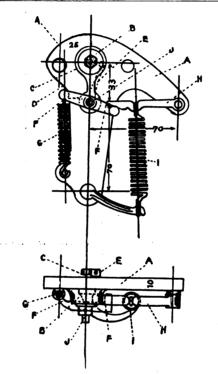
chanically operated pawl and the ratchet F, which is affixed to the cone B exteriorly, the cone is rotated to bring one pocket at a time into register with the passage C, and thus as the liquid is delivered to the passage it is met by the incoming air, and the resulting mixture is sucked by the motor into the passage G, through whose bottom branch comes the regulated supply of reducing air. The passage E is an open vent for any vapor that may be formed in the cone chamber.

The pawl of the distributer ratchet F is operated by a rod H, which, through the medium of a governing device, is actuated by the arm K of the eccentric J attached to the motor shaft. The governing device comprises a rocking arm L pivotally mounted on the bearing T, which also supports rotatively and in equilibrium the weight N and independently the pivotal arm P, directly connected to the pawl actuating rod H. In the rocking arm L is a circular slot which engages a pin O, projecting from the weight N, and this pin O in turn engages the face of the upright arm of a small bell crank tappet M, which is retained in its normal position by the spring R.

The revolution of the eccentric J causes

the eccentric arm K to rock the arm L backward and forward. The bell crank tappet M is thus made at each revolution to engage and press upward the depending arm of the lever P, which imparts motion to the distributer actuating ratchet rod H. The weight N is at the same time given a swinging motion, from which it gathers momentum that, when the motor begins to run faster than the normal speed-which is gauged by the tension of the spring R-presses the upright arm of the tappet M backward, and consequently lifts the other arm out of the path of engagement with the depending arm of the lever P, causing the rod H to miss a stroke and prevent the delivery of a charge of fuel.

As the normal speed of the motor is



MERCEDES MAKE AND BREAK.

gauged by tension of the spring R as opposed to the inertia of the oscillating weight N, this normal speed is made variable by permitting variation of the spring tension through the hand lever Q, which serves the second purpose of regulating the supply of reducing air admitted to the fuel delivery passage, this being done at the air admission valve S, which is controlled by an arm and rod connecting directly with the hand lever Q.

An English contemporary speaks of a new motor stable which is being built with a turntable, very similar to the one used by Dr. Carman and illustrated in last week's Motor World.

A preliminary certificate of dissolution of the New London (Conn.) Messenger & Automobile Parcel Delivery Co. has been filed with the Secretary of that State.

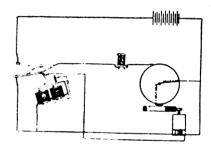
ELECTRO-MAGNET SWITCH

Battery Used for Starting and the Well Known and Induction for Switching.

Those who use magneto-electric ignition may or may not be prepared to welcome the Gregory automatic switch, according as their starting difficulties appeal to them.

There is no doubt that one experiences somewhat greater difficulty in starting an engine fitted with magneto-electric ignition than is the case with the ordinary battery, for the simple reason that the former does not secure a sufficiently strong current to generate a good spark until the momentum of the engine is fairly maintained, a process which in our experience entails considerable manual labor.

In the Gregory device a battery is used to supplement the dynamo. The battery is used to give the spark for starting purposes, and the device is designed to automatically switch in the dynamo igniter after the motor has gained sufficient momentum



with the battery ignition to cause the dynamo to generate a current strong enough to fire the charges.

When running with dynamo ignition the switch will be in the position shown in full lines in the diagrammatic drawing, and the parts will remain in this position when the motor is stopped. But when starting the motor the operator pushes the switch into the dotted line position, the long arm disconnecting the dynamo and the short arm engaging the shoulder on the armature of the electro-magnet.

When the engine has gained sufficient speed to cause the dynamo to generate a strong current the electro-magnet will be drawn down its armature, releasing the switch, which will then be forced over by its spring to automatically switch in the dynamo and cut out the battery.

Cannon Goes Fast.

At Charles River track, Boston, on Saturday last, a five mile automobile race took place between George C. Cannon, in his new racing steam vehicle, and Clarke Fosdick, in which the former scored an emphatic victory. Cannon's time is given as 9:09 3-5, or 30 2-5 seconds better than his time made at Narragansett Park, Providence, last fall.



NON-STOP READY. (Continued from page 253) G. F. Chamberlin (Panhard).16 S. D. Ripley (Gasmobile)....25 2700 Percy P. Pierce (Pierce)..... 31/2 700 E. E. Britton (Panhard).....16 1700 2200 W. S. Kilmer (Panhard)....24 A. H. Tatham (Darracq)....9 E. Clarence Jones (Benz)....10 2000 C. E. Miller (Coffee).....12 3000 (). W. Bright (Packard).....12 2200 1200 A. J. Lamme (Long Distance) 7 Ward Leonard Electric Co. 1000 (Knickerbocker) Ward Leonard Electric Co. 1050 (Knickerbocker)5 C. D. Cooke (Darracq)..... 9 1250 1250 F. A. La Roche (Darracq)... 9 W. H. Whipple (Packard)...12 Jefferson Seligman (Mors)...12 **2200** H. S. Chapin (Haynes-Apper-2000 H. S. Chapin (Haynes-Apper-1250 1700 Peerless Mfg. Co. (Peerless)..16 1700 C. J. Field (Georges-Richard).10-12 1200 A. Fischer (Georges-Richard).10-12 1200 E. Cuenod (Rochet-Schneider).12-16 2200 1400 I. W. England (Long-Dist.).. A. Riotti (Long Distance).12 1600 1200 William Morgan (Autocar)... 81/2 B. Gallaher (Fournier-2200 Searchmont) 2200

George Arents, Jr. (Panhard).12	2600	4
J. H. Yockel (Gasmobile)12	1800	Ę
J. F. Hovenstadt (De Dion-		
Bouton) 4½	850	2
R. J. Allyn (Darracq)16	1700	4
H. C. Cryder (Gasmobile) 9	1900	2
H. C. Cryder (Gasmobile)12	2500	2
Haynes-Apperson Co. (HA.). 9	1950	2
A. P. Smith (Automotor)12	1500	2
Lawrence & Hollister (spe-		
cial) 8	1700	:
Knox Automobile Co. (Knox) 6	1400	2
Knox Automobile Co. (Knox) 6	1400	2
Knox Automobile Co. (Knox) 6	1400	
A. L. Riker (Riker)12	1700	2
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T. H. Wyatt (Morgan) 4	1100	4
Central Auto. Co. (Cottereau).—	1400	4
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Searchmont 8	2500	4
CLASS B.—STEAM VEHIC	LES	
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Entrant and vehicle. H.P.	Wt.	
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W. H. Wells (Prescott) 4½	1300	
A. G. Southworth (Toledo) 7½	1500	
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	1650	4
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(Locomobile) 3½	985	:
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(Locomobile) 3½	1250	
Locomobile Co. of America	1200	•
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(Locomobile) 6 1'	750 2
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Conrad Motor C. Co. (Conrad) 7	— 2
CLASS C.—ELECTRIC VEHICL	LES.
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Elèctric Vehicle Co. (Columbia)	2200
Vehicle Eq. Co. (——)— 28	800 4

New Richmond in the Field.

It is announced that the National Automobile Racing Association will hold an automobile and motocycle race meet on June 21 at the Brighton Beach racetrack, Coney Island. The events, which will be run under the rules of the American Automobile Association, are as follows:

Five miles, open to all motor bicycles; two miles, open to all motor tricycles; five miles, open to all machines weighing less than 1,000 pounds; one mile, open to all steam machines; one mile, open to all electric machines; one mile, open to all machines; circular track record; five miles, open to all touring cars less than 2,500 pounds, carrying four persons; twenty-five miles, open to all machines, all weights; obstacle race, open to all machines.

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TRY IT AND YOU WILL BUY IT.

3

3

The FRIEDMAN ROAD WAGON

point for point, is the equal of any gasolene Automobile sold in the United States for \$1200, and is the only machine equipped with a double cylinder balanced engine that retails for less than that amount.



They will climb any grade up to 30 per cent, and develop any speed up to 30 miles per hour. Absolute and instantaneous control. Every engine guaranteed to develop 6 horse power.

Our price this year \$750.

Hung on platform springs front and rear.

FRIEDMAN AUTOMOBILE COMPANY,

3 East Van Buren Street,

CHICAGO, ILL.

You Cannot Get More for Your Money

than by using \$2.00 of it to subscribe to

The Motor World

In which each week appears a record of all that is best, brightest and newest in the world of mechanical traffic.

ASSAULTED BY HOODLUMS

Disgraceful Scene in City Streets—Automobilists Mobbed—Ringleader Goes Free.

An attack of a particularly dastardly character was made by a party of hoodlums on Saturday evening on the occupants of an automobile operated by Edward R. Thomas.

It appears that Mr. Thomas, accompanied by his wife and some friends, was returning from Long Island by way of the Forty-second street ferry, this city. On Forty-seventh street, between Second and Third avenues, is the resort of a number of boys and young men who are almost always ripe for mischief. The automobile was somewhat of a novelty to them, and they immediately began to pelt it and its occupants with any missiles they could lay their hands on.

Tin cans, boilers, palls, stones and sticks were hurled at the occupants of the vehicle, while the boys yelled themselves hoarse as they surrounded the vehicle, which had been brought to a stop by a boiler thrown between the wheels.

Mrs. Thomas was struck in the head with the lid of a boiler and rendered unconscious. Even then, however, the gang did not desist, but kept up the fusillade and showered the party with everything they could lay their hands on. After some time had elapsed, when the chauffeur managed to extricate the boiler from the wheels of the automobile, Mr. Thomas and his companions were able to escape from the mob.

Mrs. Thomas was bleeding profusely from a cut on the back of her head, and after a policeman arrived on the scene and drove the young rioters away she was driven to her home, No. 17 West Fifty-seventh street, where her injury was attended to by the family physician.

James Pollock, a thirteen-year-old boy, who was arrested as the thrower of the missile and a sort of ringleader of the attacking youngsters, was arraigned in the Yorkville court the next day. When captured on Saturday night Pollock had in his attempt to escape fallen from a fence, and he was taken to the Flower Hospital, where the surgeons first thought he had broken his ankle. It was found later that the limb had only been sprained.

"This boy hurled a heavy missile at my wife and me as we were going through Forty-fourth street in an automobile," explained Mr. Thomas, "and it struck my wife in the back of the head and inflicted a painful bruise.",

"You little loafer," said Magistrate Brann to the prisoner, "what have you to say to this?"

The boy, pale faced, made no reply.

"Well, I'll send you to the Catholic Protectory for three months in default of \$100 bonds," said the court.

Pollock was led away by a Gerry Society agent. He offered no explanation. The so-

ciety agent said later that the boy had already served a short sentence in the Protectory for throwing stones.

The next day, however, the salutary effect of the sentence was destroyed, for the boy was restored to his home through the efforts of Alderman Thomas Baldwin, who furnished \$100 bonds for the boy's good behavior.

Edison Says He is Ready.

"Wizard" Thomas A. Edison has burned his ships behind him and come out with a flatfooted and unequivocal claim that his new nickel-iron electric storage battery has at last been perfected, is a complete and emphatic success, and has attained the position of a commercial article.

"It is now up to the manufacturers of automobiles to produce a cheap carriage," he is quoted as saying. "I have, after three years of hard work, solved the problem of an electrical storage battery which can be used for long distance work and which will wear three or four automobiles out before it will succumb itself.

"These batteries will run for 100 miles or more without charging. They can be charged in a few hours. They require no attention, for all that is needed to replenish the liquid is to pour in a little water every now and then to take the place of that which has evaporated. I do not know how long it would take to wear out one of the batteries, for we have not yet been able to exhaust the possibilities of one of them. But I feel sure one will ast longer than four or five automobiles.

Buffalo Fathers Maligned.

It turns out that some one has been maligning the character of the City Fathers of Buffalo, N. Y. They did not pass the absurd ordinance limiting speed of automobiles to seven miles an hour, as was reported. The legal rate of vehicles in that city is eight miles, just as it has been for a number of years.

Tell Tale Scores.

That there existed a real want for a device of the kind appears to be proved by the success attending the marketing by the John Simmons Co., New York, of their Liquid Tell Tale. The device is designed to show the exact amount of gasolene in the tanks of steam vehicles, and it does its work in a thoroughly satisfactory manner.

Another New Firm.

The General Motor Car Co., with headquarters at 239 West Fiftieth street, this , city, has been formed by C. J. Field and G. N. Stanton. They will sell French and American cars, and have obtained the agency for the Georges Richard cars.

Recent Incorporation.

Sandusky, Ohio—Sandusky Mobile Co., with \$100,000 capital, to manufacture automobiles.

TWO BODIES MAY CLASH

Legislature Opens Baltimore Parks to Autos, but Board Does not Like it.

Notwithstanding the fact that the Maryland Legislature at its last session ended the long standing quarrel between the commissioners of Druid Hill Park and automobilists by passing a bill permitting motor vehicles to enter all parks, efforts to exclude them are still being made.

At a meeting of the Park Board held last week President Clendinen introduced the following resolution:

Resolved, That no automobiles or vehicles of that character be allowed to pass around or be upon the "lake drive" after the hour of 4 p. m., nor to pass around or be upon the road on the northerly and southerly sides, respectively, of the duck lake, or pond, adjacent to the Crise Spring.

Resolved, That between the hours of 6 and 10 a. m. the speed of automobile around the lake drive may be unlimited, but be restricted elsewhere and at all other times, so as not to exceed six miles per hour, as now provided.

He called attention to the fact that there had been two runaways in the park caused by the horseless vehicle, and he thought that its restricted use in the park would lessen the danger of repetition.

Mr. Waters said that in his opinion the board was nearing the danger line when it endeavored to restrain the auto from using certain roads upon which the horse and vehicles generally were allowed to travel.

He added that the Legislature had seen fit to pass a law authorizing "autos" to go into the parks, despite the fact that the board had adopted a rule that they were to be kept out.

Mr. Clendinen argued the commissioners might make such rules for the government of vehicles in the park as they saw fit. He did not agree that there was any question about the board's right to keep the auto off certain driveways.

Mr. Waters suggested that the auto question was a broad one, and should not be deait with with undue haste. The horseless carriage, he thought, had come to stay, and sooner or later horses must get used to it, accidents or no accidents. He moved that the matter be allowed to go over until the next meeting, which was carried.

Loss is Greater,

The loss to the Pennsylvania Electric Vehicle Company by the fire which attacked their place at No. 250 N. Broad street, Philadelphia, last week, may reach \$30,000. There were about 100 automobiles in the building Of these seventy-five were on the first floor and were gotten out. Of the twenty-five on the floor above a number were removed and then the power gave out and it was no longer possible to run the elevator.





LARGE AND HARD NICKEL STEEL RIVETS GREAT TENSILE STRENGTH AND ACCURACY

PROMPT DELIVERIES MADE



LIGHT RUNABOUT PATTERN

AVOID TROUBLE BY EQUIPPING MACHINES
WITH LARGE CHAINS

THE AUTOMOBILE AND CYCLE PARTS COMPANY

DIAMOND CHAIN FACTORY

Indianapolis

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Indiana



Snapshot of the Searchmont climbing Roslyn Hill in the Long Island Endurance Contest.

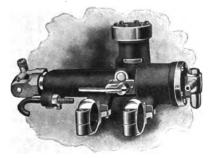
100%.

Island Endurance Contest and all of them finished without a stop except for one punctured tire. TWO FIRST AMERICAN CARS and TWO FIRST FOUR-PASSENGER CARS TO FINISH. We did not remove our Tonneau bodies, either.

FournierSearchmont Automobile Co.

AGENCIES: JOHN WANAMAKER, New York and Philadelphia. 1236 Orkney St., PHILADELPHIA, PA.

THE REASON AUTOMATIC AIR PUMP FOR STEAM VEHICLES.



Keeps the air pressure in the fuel tank wherever desired automatically, without care or attention.

We also make the REASON JR. AIR PUMP "Non-Automatic," which is controlled from the seat of the wagon.

Write us for circular with full description.

EASTERN AGENTS:

CHAS. E. MILLER, 97 Reade St., New York.

SPALDING-BIDWELL, 29 W. 42d St., New York.

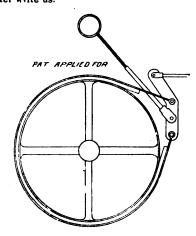
POST & LESTER, Hartford, Conn.

IF A BRAKE BREAKS

ALMOST ANYTHING MAY HAPPEN.

You may **think** your present brake is efficient. If you have this one you **know** it is.

The difference between thinking and knowing ought to be vital to you Better be sure than sorry. Better write us.



NEW JERSEY AUTOMOBILE CO.,

8 Central Avenue,

NEWARK, N. J.

L'AUTOMOBILE.

Sole Official Newspaper of the "Moto

Club of Belgium."

Under Patronage of the King Leopold II.
First Belgian Publication.

RUE DES LENDRES,

BRUSSELS.

Speed Should be Variable.

"Now that motor vehicles are coming into extensive use, the necessity for a rigid limitation of the speed allowed in the most frequented parts of the city is becoming more and more evident," says a Boston paper.

"It would have been well if some time ago bicyclists had been held to a stricter sense of responsibility in this respect, but, as has been pointed out, a bicyclist who runs into a pedestrian is himself in danger of serious injury. A motor vehicle gives comparative immunity to those who ride in it, while it is a source of deadly peril to all who come in its way. Driven at a speed as low as seven miles an hour, an automobile is a serious annoyance to pedestrians in our crowded streets. They may, and they generally do, escape bodily harm; but the nervous tension caused by the effort to keep out of danger and the shock of having such a vehicle steal upon them unawares are decidedly detrimental to physical and mental wellheine

"Outside of the crowded parts of the city drivers of motor vehicles should be allowed reasonable latitude in the speed which they may attain, but in the shopping districts five miles an hour ought to be the limit, and it might be well if a similar restriction were put upon bicycles and vehicles drawn by horses

"Such a restriction, if made general, would not impose any hardship or real inconvenience upon those who make use of automobiles, carriages or bicycles, while by its enforcement the comfort and safety of the public would be emphatically enhanced."

Small Cars Lose Ground.

The word small in relation to cars is swelling visibly. A year or two ago it meant a 3 or 4 horsepower car. Then it rose to 5 or 6 horsepower. Now it attains to the dignity of an 8, 9 or 10 horsepower.

The development has been caused by the fact that the difference in cost between the 5 and 8 horsepower car was so small as to squeeze the former out of the salesroom when the larger pattern is on sale. The higher power permits a less cramped body, and the public gets more to look at for its money.

Trademarks.

38,317. Vehicle Tires. New York Belting & Packing Co., Ltd., New York, N. Y. Filed Jan. 18, 1902.

The representation of a cross sectional view of a vehicle tire where the fastening lugs are embedded, having thereon a clock dial and the words, "On Time to the Minute," Used since July 1, 1901.

Air and Water Pumps.

THE UNION STEAM PUMP CO., BATTLE CREEK. MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.

Prescott STEAM TOURING CARS.

Superior in Style, Design and Finish.



New Indestructible Burner.

Pilot Light.
Holds Steam to Any Desired Pressure
and Never Blows Out.`
American Roller Bearings.

Superheated Steam.

Greater Mileage to the Gallon of Fuel and Water than any Other Steam Vehicle.

Reverse Lever Operated by the Foot.

Encased Engine. Automatic Lubrication.

Running Gear, New Design, Extra Heavy.

Two Double-Acting Brakes on Rear Hubs. No Strain on Compensating Gear. Large Fuel and Water Capacity

Steam Air and Steam Water Pumps,

both operated from the seat.

Weight of Cars, 1250 lbs.

Write for Catalogue and Agent's Proposition.

Prescott Automobilo Mfg. Co. 83 Chambers St., New York City.

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The Week's Patents.

699,860. Steam Wagon Truck. Paul H. White, Indianapolis, Ind., assignor to White Steam Wagon Co., Indianapolis, Ind., a corporation of Indiana. Filed Nov. 27, 1901. Serial No. 83,831. (No model.)

Claim.—1. A truck for wagons, consisting of a single axle, and, an open frame carried by said axle above the same, the said open frame being adapted for attachment to the main frame of a wagon so as to receive a projected portion thereof.

699,962. Vehicle Brake. Ellsworth M. Letts, Waverly, N. Y., assignor of one-half to Ellsworth Gamble, Waverly, N. Y. Filed Sept. 16, 1901. Serial No. 75,542. (No model.)

Claim.—1. A vehicle brake comprising a friction drum fixed to one of the vehicle axles, a friction band encircling the drum, a pair of bell crank levers, the ends of the band being connected to the lower ends of the said levers, a rod secured to the outer face of the brake band and having its upper end hooked to engage a bracket on the running gear for supporting the said brake band, a link pivotally secured between the upper ends of the said levers, a vertically arranged rod pivotally secured at its lower end to the brake band, a short link connecting the free ends of the said link and rod, and a brake rod secured to said short link.

699,995. Engine. George E. Whitney, Boston, Mass., assignor to Whitney Motor Wagon Co., Kittery, Me., a corporation of Maine. Filed Jan. 13, 1902. Serial No. 89,490. (No model.)

Claim.—1. An engine containing a piston rod, a connecting rod, a wrist pin joining the two, a guide and a guide wheel mounted on said wrist pin.

2. An engine containing a piston rod, a connecting rod, a guide wheel connected with and moved by said piston rod, and guides arranged at opposite sides of said guide wheel.

700,032. Wheel Hub. Lucius T. Gibbs, New York, N. Y., assignor to Vehicle Equipment Co., Brooklyn, N. Y., a corporation of New Jersey. Filed Sept. 11, 1901. Serial No. 74,993. (No model.)

Claim.—A wheel hub comprising in combination a single casting, a tubular wooden core driven or pressed into the same, the outer end of said casting having an opening equal in diameter to that through the wooden core, and the inner end being of greater diameter than the core, to afford two supports for a bearing, and a box or bearing extending through the hub and supported at each end by the casting, as set forth.

700,100. Sparking Apparatus for Gasolene Engines. John W. Stanton, Providence, R. I., assignor of one-half to Joseph D. Fitts, Providence, R. I. Filed Aug. 26, 1901. Serial No. 73,390. (No model.)

Claim.—1. In a sparking apparatus for a gasolene engine, the combination of a properly mounted oscillating shaft having a sparking pin projecting therefrom, an electrode bar mounted and longitudinally movable on a fixed support, means adapted to move said electrode longitudinally to the sparking pin, and a spring adapted to be compressed by said longitudinal movement of the electrode longitudinally away from the sparking pin when said spring is relieved from said compression, substantially as described.

700,136. Reversible Galvanic Battery.

Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Co., a corporation of New Jersey. Filed March 5, 1901. Renewed March 3, 1902. Serial No. 96,408. (No model.)

Claim.—1. An element for a reversible galvanic cell, consisting of electrolytically reducible scale oxid of iron, substantially as set forth.

2. An element for a reversible galvanic cell, consitsing of electrolytically reducible scale oxid of iron in finely divided form, substantially as set forth.

700,137. Reversible Galvanic Battery. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Co., a corporation of New Jersey. Filed March 5, 1901. Serial No. 49,935. (No model.)

Claim.—1. A grid or plate for alkaline reversible galvanic batteries, the immersed surface of which is unaffected by the alkaline solution and having a series of openings therein, a receptacle secured in each opening and having a surface which is unattacked by the alkaline solution, both of the exposed walls of each receptacle being elastic and having numerous perforations permitting the passage of the solution therethrough, and an active material tightly packed in each receptacle, whereby the elastic walls of the latter will maintain continuous pressure with the active material, substantially as and for the purposes set forth.

700,175. Automobile. Charles Cotta, Shannon, Ill. Filed Oct. 5, 1900. Serial No. 32,111. (No model.)

Claim.—1. In a vehicle, the combination with a suitable running gear, of an axle, a bearing ring vertically pivoted upon the axle, a wheel journalled upon the bearing ring and having a portion extending within the same, a driving shaft and a universal joint connecting the driving shaft to the hub within the ring concentric with the wheel and substantially in the pivotal axis of the ring, substantially as described.

700,210. Storage Battery. Levi W. Lombard, Boston, Mass., assignor to Jewell Storage Battery Co., Pittsfield, Mass., a corporation of Maine. Filed Feb. 11, 1902. Serial No. 93,545. (No model.)

Claim.—The improved element for storage batteries comprising a number of thin sheets or strips of metal assembled together and composed alternately of oxidizable and unoxidizable or difficultly oxidizable sheets or strips all in contact with one another, the said oxidizable strips being adapted to be converted into active material by chemical or electrolytic treatment, and the strips of unoxidizable or difficultly oxidizable metal holding between them the layers of active material and thereby supporting the same, substantially as described.

700,241. Internal Combustion Engine. William J. Robb, Portadown, Ireland. Filed Dec. 30, 1901. Serial No. 87,835. (No model.)

Claim.—In a four cycle explosion engine, the combination of a working cylinder, a support for the cylinder, a piston to the cylinder, means for sliding the cylinder upon its support relatively to the piston, a crank shaft carried by the support, means for operatively connecting the piston with the crank shaft, a valve to admit fuel to the cylinder, a cam graduated in the direction of its axis of rotation for operating the valve, means for operatively connecting one of these members with the cylinder so that movement of the cylinder causes different portions of the cam to co-operate with the valve, means for operatively connecting the cam with the

crank shaft and means for maintaining this operative connection when the cylinder is moved upon its support, substantially as and for the purpose set forth.

700,243. Rotary Explosive Engine. Samuel S. Rose, Amador City, Cal. Filed March 20, 1899. Serial No. 709,700. (No model.)

Claim-The herein-described combined explosive engine comprising the cylinder, the rotary piston arranged therein, and fixed on a shaft, the passages 12 communicating with the interior of the cylinder at opposite sides of the piston, the exhaust passages 64, the passages 13; the said passages 12, 64 and 13, intersecting at common points, the passage 16, the supply passage 63, for gas, the cut-off valve 17 interposed between the passages 63 and 16, and having a crank on its stem, the explosion chamber 31, the hollow rocking valve 14 interposed between the passage 16 and the inner ends of the passages 13 and communicating at one end with the explosion chamber 31, the rocking valves 52 interposed between the adjacent ends of the passages 12, 13 and 64 and occupying the points of intersection thereof, the eccentric fixed on the piston shaft, the strap surrounding said eccentric and adjustably connected to the crank on the stem of the valve 17, the lever 57 connected with the rocking valves 52, and suitable means for igniting explosive mixt-ure in the chamber 31, all substantially as specified.

700,295. Four Stroke Petroleum Motor. Henrik A. Bertheau, Stockholm, Sweden. Filed April 3, 1901. Serial No. 54,202. (No model.)

Claim—1. In a hydrocarbon motor, in combination, inlet and exhaust valves, a device to control each of said valves, axially shiftable cams to operate said devices and means to retard the action of the inlet valve, to automatically increase the quantity of hydrocarbon vapor to form an explosive mixture richer in hydrocarbon, substantially as described.

700,309. Piston for Gas or Other Motors. Hermann E. Ebbs, Nuremberg, Germany, assignor to the Firm of Vereinigte Maschinenfabrik Augsburg und Maschinenbaugesellschaft Nurnberg, A.-G., Nuremberg, Germany, Filed Dec. 19, 1899. Serial No. 740,-895. (No model.)

Claim—1. In combination, the crosshead, the semicylindrical removable and interchangeable guiding portions carried thereby, a short shaft integral with said crosshead extending axially rearward therefrom, a rear piston portion threaded on said shaft and packing rings carried thereby, substantially as described

700,310. Alternating Current Electric Motor and Controlling Means Therefor. Rudolf Eickemeyer, Yonkers, N. Y.; Rudolf Eickemeyer, jr., Carl Eickemeyer and Mary T. Eickemeyer, executors of said Rudolf Eickemeyer, deceased. Filed Aug. 10, 1892. Serial No. 442,722. (No model.)

Claim—1. In an alternating current motor, provided with multipolar magnetic field circuits; an armature provided with coils connected in series in a closed circuit, and occupying recesses in the periphery of the armature core; counterbalancing field coils of high resistance within the influence of the magnetic field circuits, and counter field coils comprising short circuited windings surrounding the said field circuits, closely adjacent to and overlying portions of the armature coils.

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Wheel Co., New York, N. Y., a Corporation of New Jersey. Filed Dec. 31, 1901. Serial No. 87,861. (No model.)

700,598. Primary Battery. Michael M. Bair, Levallois-Perret, France, assignor to Societe Anonyme le Carbone, Levallois-Perret, near Paris, France. Filed March 21, 1901. Serial No. 52,199. (No model.)

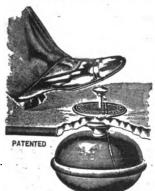
Claim-1. In a galvanic cell, the combination with the inner vessel of a cover having an internal annular recess adapted to receive the edge of said inner vessel, said cover moreover comprising an external annular frame, having an internal lip thereon over which said edge can be folded, and insulating binding material for securing said inner vessel within said annular frame, substantially as described.

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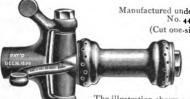
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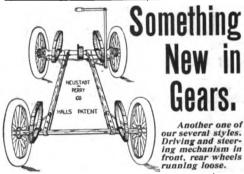
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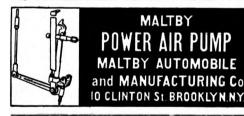
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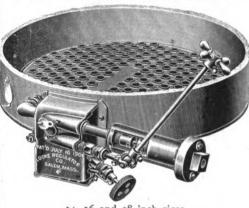
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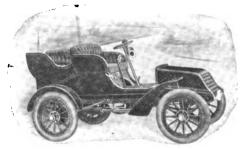
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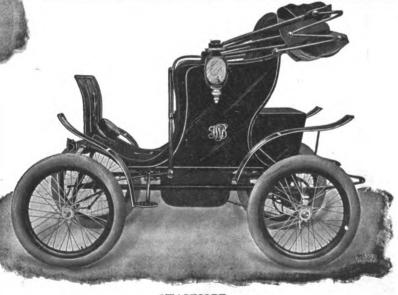
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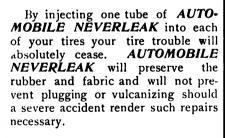
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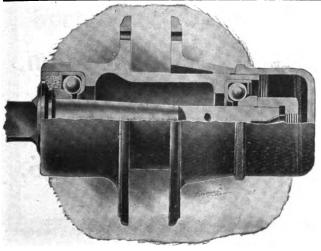
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THE ONLY DEDION MOTORETTES ON THE MARKET, with the latest model DeDion 5 and 6 H. P. Motors. On account of the great demand for the new Model DeDion Bouton Tonneau in Europe, only a few can be secured for the United States. If you wish to secure one, SEND IN YOUR ORDER AT ONCE- Beware of IMITATIONS. DeDion Bouton Genuine Motors and Automobiles and their parts can only be secured through me or the parties I supply. SEE THAT THE COMPANY'S NAME IS STAMPED ON EVERY PART, if it is not, you are receiving an IMITATION. All sizes of DeDion Motors and parts kept in stock; DeDion Batteries, Spark Plugs, Tremblers, Valves, etc., etc. Sold in large or small quantities.

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Artillery Wheels.

We are now prepared to furnish these Hubs, Ball-Bearing and Key-Seated, for Automobiles weighing from 500 to 4,000 pounds.

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ALL RACES ARE GROUND IN POSITION IN HUBS. CONES AND CONE SEATS ON SPINDLES ARE GROUND TO GAUGE.

Hubs and Spindles are machined Right and Left.

WRITE US REGARDING YOUR REQUIREMENTS.

THE AMERICAN BALL-BEARING COMPANY, Cleveland, Ohio, U.S.A.

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NATIONAL Model Fifty.

NATIONAL VEHICLE COMPANY, INDIANAPOLIS, INDIANA.

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1400 East 22d Street.

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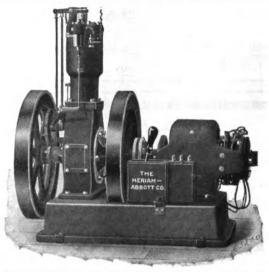
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WRITE FOR PARTICULARS AND PRICES TO

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Reading Steamers

Are all they OUGHT to be and a little more; different from most steam carriages in that respect.

The performance of the car itself is the most convincing testimony of its worth.

WILL TELL YOU ALL ABOUT IT FOR THE ASKING.

Good Agents Only Wanted. PRO

PROMPT DELIVERY.

STEAM VEHICLE COMPANY OF AMERICA, 52 West 43d Street, New York. ...THE...

GROUT

WINS ANOTHER

FIRST PRIZE

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New York-Southport Run,

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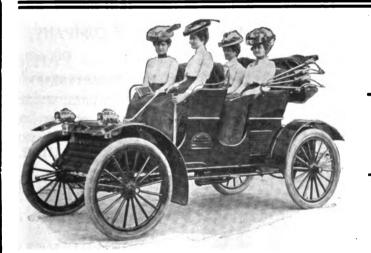
ORANGE, MASS.

The ONLY AUTOMOBILE that has Won EVERY ENDURANCE CON-TEST Held in America is the

Haynes-Apperson

The Most Practical Automobile in the World

WE WON THE 100-MILE NON-STOP TEST ON MAY 30 AS USUAL



RUNABOUT

\$1200

6 horse-power, 2 passengers

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TE offer a proved efficiency and reliability, ease of access to working parts, and simplicity of operation not afforded by any other make in the World, at a moderate cost for the Finest Workmanship.

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If it Were Possible to Carve Circles of Air

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out of the atmosphere and to affix them to the wheels of a motor vehicle,



DETACHABLE TIRES

would be

OUTCLASSED

as

Only air itself is more resilient.



WHY?

Because its sidewalls are graduated in proportion to the tread and the air chamber is above the rim or flanges; it is not half buried in the rim.

THIS GIVES FLEXIBILITY—"LIFE" SPEED—COMFORT.

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TRY IT AND YOU WILL BUY IT.

The FRIEDMAN ROAD WAGON

point for point, is the equal of any gasolene Automobile sold in the United States for \$1200, and is the only machine equipped with a double cylinder balanced engine that retails for less than that amount.



They will climb any grade up to 30 per cent. and develop any speed up to 30 miles per hour. Absolute and instantaneous control. Every engine guaranteed to develop 6 horse power.

Our price this year \$750.

Hung on platform springs front and rear.

FRIEDMAN AUTOMOBILE COMPANY,

3 East Van Buren Street.

CHICAGO, ILI...



The Standard Acetylene Lamps for vehicles of all sorts for years have been

SOLAR LAMPS

From the time of the introduction of acetylene gas there has been only one lamp that would stand every test—The Solar.

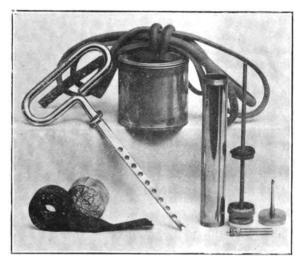
The acme of Solar perfection is the new French Auto Headlight illustrated here.

Our Catalogue tells all about Solar Lamps of all kinds—Send for it.

BADGER BRASS MFG. CO., - Kenosha, Wis.

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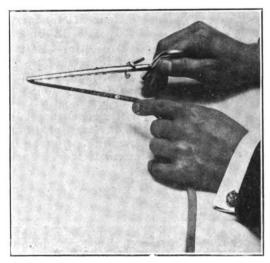


The Repair Outfit Complete

In Price—
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Attaching Rubber to Inserting Tool

WHAT has there been wanting during the past three years to make single tube Automobile Tires more satisfactory? We will tell you. A repair outfit which would successfully close a puncture in a few minutes and make a permanent repair. The owners of machines object to removing tires and sending them away to be vulcanized for the reason that they lose the use of the machine, and it is an expensive method of repairing.

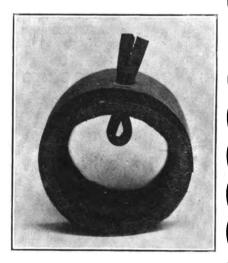


Inserting Rubber in Puncture

WE have a device that anyone can use successfully and it should surely stimulate the use of single tube Automobile Tires. We shall be glad to furnish a complete outfit for \$2.00 and ship it to you on trial to be returned if unsatisfactory.

THE DIAMOND RUBBER CO.

AKRON, OHIO



Trim Rubber on Outside and Job is Finished

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DETROIT, 310 Woodward Avenue

International Tires.

A FACT IS WORTH A HUNDRED THEORIES.

MR. HARRISON C. WILLIAMS,

May 15, 1902.

General Manager, International A. & V. Tire Co., 346 Broadway, New York.

540 Broduway, New York

Dear Sir:—After three years of study of rubber tires for heavy and light vehicles, The "Mobile" Company of America placed its contract for 1901-2 with your company.

One delivery wagon equipped with these tires has made over 2,500 miles since April 1st without showing the slightest sign of wear. Mobile coaches carrying eleven persons are daily covering sixty miles out of New York, the tires being those of the International A. & V. Tire Company. For the first time in the history of this Company, we have ceased to worry about the tires used on our carriages.

1 () N

Yours truly, JOHN BRISBEN WALKER,
President "Mobile" Company of America.

INTERNATIONAL A. & V. TIRE COMPANY,

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346 Broadway, NEW YORK.

435 Wabash Avenue, CHICAGO.

<u>OUR PROPOSITION.</u>

We manufacture wire wheels.

We manufacture every part except the balls.

We have a large factory devoted solely to this end.

We have been at it for years.

We make one hundred, where you make one.

We make them for vehicles weighing from 300 to 2500 pounds.

We believe we can save you money—and give you better wheels.

Will you let us try?

WESTON-MOTT COMPANY, Utica, N. Y.

AGAIN!

100% Long Island Endurance Contest.

100% A. C. A. Endurance Contest.



AGAIN VICTORIOUS! Three cars started in the Endurance Contest of the Automobile Club of America on Memorial Day, and all of them finished the 100 miles without a stop.

If you would know more about "AMERICA'S LEADING AUTOMOBILE," write us

Fournier-Searchmont Automobile Co.

1236 ORKNEY STREET, PHILADELPHIA, U. S. A.

WATERLESS KNOXMOBILES WIN AGAIN.



Three standard machines started in the New York Endurance Contest and all finished on time without a stop of any description and in perfect condition, being the first American built machines to finish without a stop. This splendid showing on a hot day convinced the most sceptical experts of the great superiority of the Knox system of air cooling over all other systems for cooling gasolene engines. A large addition to our plant just completed will allow us to book a few more orders for August and September delivery.

Price \$1100 after June 1st.

KNOX AUTOMOBILE COMPANY, Springfield, Mass.

NEW YORK AGENCY, 152 W. 38 St., F. H. FOWLER, Representative. CHICAGO, AGENCY, 1408 Michigan Ave, H. M. DAVIS, Representative,

THE NEW YORK-BRIDGEPORT 100-MILES NON-STOP CONTEST

PROVED

The Old, Old Story Over Again—THE LION'S SHARE THE HONORS

FOR

The White Steam Carriage

3 STARTED, 3 FINISHED,

each of them going through without adding a drop of water or fuel to its original supply, and again they were the only "steamers" with such a record.

THEY WERE ALL CERTIFICATE WINNERS, OF COURSE.

It simply emphasized what the New York-Buffalo and the Long Island Contests had already made plain—that

The White is the only trustworthy steam carriage made.

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WHITE SEWING MACHINE COMPANY,

(AUTOMOBILE DEPT.,)

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, June 5, 1902.

No. 10

51 4-5 STILL STANDS

Staten Island Mile Trials Fail to Move Fournier's Figures—New Record for Middle Weight Gasolene Cars, 1:17 2-5, and for Motor Bicycles, 1:10 2-5: Tragic Accident Mars Day's Sport.

The speed trials of the Automobile Club of America—mile and kilometre flights against the watch, sudden, swift jabs at Father Time and the record tables—these were held on Staten Island on Saturday, May 31.

It is a notable story.

Day, cobalt blue; all things superbly planned; club officials in highest hope; five thousand spectators, sun bathed and in a fine lather of enthusiasm. Preliminary trials exciting, satisfactory; record table already shattered, new mark being put up-when suddenly it is all broken off in death and injury and sorrow, as is now well known throughout the whole world. An electric flyer, the Baker, built low, torpedo fashioned, rusking demoniacally over the course, seventy miles an hour, plunged aslant over into the spectators, killing one man (perhaps two -two it finally proved), injuring several, striking terror to the hundreds close by and wringing a subdued cry of horror from the thousands who saw the fearful thing.

It was a frightful accident—yes, an accident, unforeseen, unavoidable by any human forethought, unavoidable by any knowledge known to humans up to that moment. The Automobile Club had boarded up and policed and roped the course in so complete a manner as to acquit them of the faintest blame. Again, the Baker wonder was strongly built, safely built. Did not the owner himself man and guide it? Of course, he believed in his flying torpedo. He knew what it had to do, had tested it, had trusted himself in it many times. He knew the beast well, had it in

* * *



absolute control, was, in fact, part of it, or it a part of him. By a miracle he and his companion escaped with scratches. Away with all that talk of constructive filmsiness, of carelessness, incompetence! In the moment of agony Baker—wonderful thing that—braked the car and shut off the power. He had felt that frightful, incomprehensible wobble, felt the sickening sense of lost control. He did all that a brave man, sharply intelligent, could do. All thinking men acquit, or will yet acquit, Baker!

The speed trials started promptly at 11 o'clock, the set hour. The cars were sent off one at a time, at three to five minute intervals. They dashed over the course like things bereft, drivers holding on for life, crowd buzzing, shouting, worked into the last frenzy of tumultuous admiration. One by one they flashed past the finish—forty, fifty and sixty miles an hour—rushed madly over that beautiful country mile. Taking it all in all, the day, the thickly sown police, the five thousand spectators, the corps of

(Continued on page 288.)

MAKING THEIR LIVINGS

For That Reason the A. C. A. Non-Stop Contest Committee is Unable to Announce Awards—Unofficial Records Give 24
Certificate winners—No Scorching; No Excitement.

At 9 o'clock sharp on Friday morning last, May 30, the first participant in the 100 miles non-stop contest promoted by the Automobile Club of America left the starting point at Fifth Avenue and Fifty-eighth Street, this city.

Long before the sun sank to rest that evening the last of the fifty-three participants had either completed the prescribed course or so much of it as fate or individual limitations permitted.

Despite the nearly six days that have elapsed there is not a breathing being who can hold up his right hand and truthfully or authoritatively say one word concerning the results, that is, the awards.

Names, numbers, figures and alleged facts in great detail have been printed. Some of them may prove good guesses, but guesses they are and nothing more. Newspapers must needs handle events while the events are yet "alive." The public has ceased to admire Rip Van Winkles and has small appetite for stale news. This is a go-ahead age. When those who fail to appreciate the fact keep locked within themselves information that belongs to the public the public must be served with the best that is obtainable.

The competitors who paid \$10 each to participate in last Friday's non-stop contest and the public and the papers are yet in the dark as to the "what's what" and "who's who" of the affair, must therefore be content with what they have been able to pick up or had served up to them. If not in words then in actions the promoters of the event officially

(Continued on 295.)

51 4-5 STILL STANDS—Continued From Page 287.

officials, the official stands, the flags, the bells, the beribboned couriers darting hither and thither—the like as a pure sport picture never was in this country. It was sport of the dawning century, and he whose sensory apparatus, soul, herves, or whatever, was not whipped into white vibration, into hot and cold emotion, were fit not for this world, but for some other, say Lotosland.

APPROACHING THE KILOMETER.

packed with eating, drinking and chattering humanity—one hotel even had a blatant, brassy band—was roped off, ropes serving purpose well, keeping the crowd in check, policemen seeing to it that humans took good care of themselves. The course, in brief, was perfectly controlled. All knew the danger and few took any risks of contact with the lightning-fast motor cars. All carefully planned and looked after by the club of-

ditions might be pluperfect. Everything safeguarded, all inequality smoothed away, cars stopped, rails imbedded in top dressing. Yes, everything was done, and to the eye all was highly safe and satisfactory. But all was not perfect for a sixty mile pace. For ordinary work, yes; for miles in 56 seconds, nodecidedly no. At this pace every inequality is magnified hundredfold. And, again, but. For there was three hundred yards from the finish a curve, not a sharp curve, only 8 per cent, but, coming up the course you could not see around it. You took it on faith. And still another fact that spelled danger. Just beyond that curve was a slight fall, followed by a slight rise, a dip of no consequence



The course was a mile and a half long, an extra quarter at the start for warming up purposes, and a similar die-away stretch at the finish. For three-quarters of a mile, up to the kilometre point and beyond (.621 mile) not a human being allowed on it. Road policed, every inch of it; walking police, mounted police, bicycle police, plain men, roundsmen and sergeants, with a captain in gold lace and buggy commanding all. All roads boarded up; behind the boards bunches of peopled carriages and wheeled things of all sorts, comfortably settled for the day, with eatables and drinkables, with fine clothes, high spirits and all the factors of holiday equipment. The last four hundred yards, dotted here and there by hotels,

ficials, bright, sharp, high-class men of affairs, men who know how to do things well, men who in this new sport planned a function of precision and beauty, with safety the keynote at every step. Thus it is that absolutely not a featherweight of blame attaches to the Automobile Club of America, sad accident, already noted, being beyond human ken, but serving a very great purpose, teaching a very great lesson.

* * *

It was supposed that the course was ideal for the purpose. A new macadam road, with to the casual eye a perfectly smooth surface, a surface treated for days before the trials under direction of A. C. A., so that the con-

ONE OF THE TELEPHONE STATIONS.

sixty mile an hour flight indubitably a serious thing. The rush around that curve, then the dip—these meant strain, the extra final wrench that searches every atom of the car, and if there be flaw or weakness there, however slight, therein lurks possible destruction—death as has been seen—for this curve, this dip, threw the Baker speed demon into the air. Baker speed demon, after wild passes and brakes hard on, lands again; one wheel is smashed, the black, sharp nosed,

uncanny car swerves into the crowd. And thus is killed a gala day, and certain homes are hung with deepest weeds, and the five thousand there present moved away sadly.

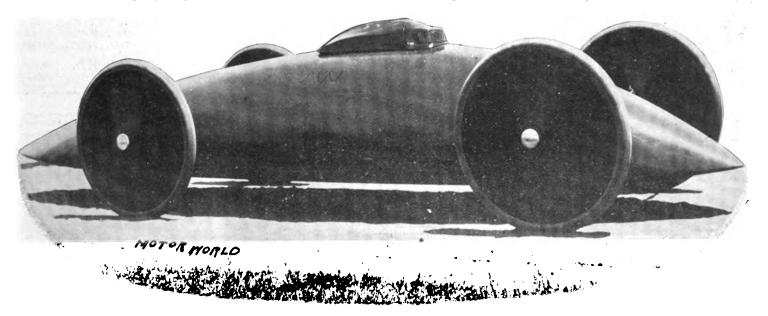
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You are now to see how these trials were run, and to admire the perfectness, the thoroughness of it all. Course a mile and a half long, divided into these sections—an eighth of a mile for fooling purposes, for preparation and in which to get up speed. At the end of the eighth, flagged posts and a telephone stand-temporary 'phone through which operators talked to three other points, the start, the kilometre and the finish. Telephone operator says, after 'phoning down the line: "Course clear." Uniformed party -beautiful uniform, all gray, picked out in fine crimson stripes; on coat collar a double crimson shield, gold letters A. C. A.-at the word said uniformed party steps out and up, times figured out, 'phone to preliminary start, "All ready." Again white flag, another car off on its journey, and so on, and so on, the whole thing absolutely perfect.

As above noted, these flights against the watch, the solitary car, flying along the broad, clean-swept road in superhuman fashion, operator hanging to the job like grim death, tense, taut, prayerful, seeming dead, yet alert, every molecule of him-this flight against time, the ringing bells, the pennanted posts, the roped, chattering crowd, the couriers flying here and there, the myriad officials, with their blue and scarlet bands, the army of alert police, the family parties in great trucks, carriages and whatnot, the hotels crowded with sandwich hunters, the bars stormed with refreshment seekers-all this mile of things, framed in ideal country and the whole arched with a resplendent,

tric, the lightning torpedo, built to demonstrate a belief, built to prove that power was wasted, built to prove that power should be applied direct to the wheels and not lost in intricate connections, and that 7 h. p. so applied would equal the speed of 57 h. p. otherwise applied; built at a cost of \$20,000, and tried, said rumor, to the tune of 125 in the hour. What of that? What wonder would it work? And Mrs. Howard Gould, the only lady entrant, with her 35 h. p., over 2,000 pounds, Daimler. What of her? What laurels would fall to the lady? Then there was the Davis steam 10 h. p. Locomobile; great things expected of it; expectations justified, a new record set up. Another star, a Renault 8 h. p. gasolene car, under 1,000 pounds, entered by L. S. Thompson, said to be a wonder. Such were the stars; these the cars most fancied by the talent.

The shining mark was, of course, Serpol-



THE BAKER ELECTRIC,"TORPEDO."

holds great white flag, four feet square, in centre of course. This signals to car ready for trial, "Course clear." Car gets under way; gets fast; still more so; flashes past the stand. Immediately another uniformed party steps out and holds out a four foot red flag. meaning "Course closed," and there that flag is held until word comes back from the finish that course is again ready for action. As soon as vehicle darts over this preliminary point (not the start) operator telephones to still another stand, 100 yards up the line, "Car No. 11 off." This second stand is the actual starting point, with connection over entire course and with electric timing apparatus reaching to kilometre and to finish. Car, now at full speed, rushes over the start. Button is pressed on timing machine. 'Phone to kilometre point and to finish, "Car No. 11, 10:12:23 1-5." They know at kilometre and mile that car No. 11 is under way, having crossed the line at time stated, and immediately, automatically, a bell rings continuously, and only stops when the mile is finished. Car flashes past kilometre, past finish, slows

vital, lucent blue sky, all this made a panorama of outdoorism, a picture of high planned sport, a day pure, simple, beautiful, one much loved by the healthy sons of men.

Along the preliminary eighth mile stretch chauffeurs, owners and groomsmen were busy. Much talk as to respective merits of cars. What would this one, what would that one, do? The palm generally awarded to the great 60 h. p. Mors (that famous Fournier car; mile record on Coney Island Boulevard, 0:51 4-5, November 16, 1901), entered by E. E. Britton and A. J. Levy, the redoubtable Fred Walsh, admired among chauffeurs, in control. Would it beat the record? And if so, how much? Under 50 seconds? probably, for rumor held that in a trial made earlier in the week it had been sent over the mile in 0:54. And that curious, bodiless Lewis Nixon car, 7 h. p., 997 pounds, stripped for the under 1,000 pounds gasolene class, stripped down to the running gear-what would the newcomer do in the hands of the clever A. F. Camacho? And the Baker eleclet's 0:29 4-5 kilometre, made the other day, the French "Easter egg," steam driven, doing that trick. No one expected to touch this, and no one did. To be sure, the illfated Baker did 0:36 1-5, but then the conditions are not comparable. On a smooth, straight stretch the Baker streak might shade it. Coming nearer home, another target was the American mile record for the big cars-Fournier's 0:51 4-5. As noted above, the former Fournier Mors car, now owned by Messrs. Britton and Levy, ate the mile up in 0:55 1-5 on the first trial. Later they would have done better-but there was no later. Up to the time of the accident 25 trials were made. They were abundantly successful, and had the trials been concluded many new records would have been written, The table shows that on the second trials the cars greatly bettered the times made in their first attempts. Chauffeurs were probably more confident, devil-may-care and the

The appended tables, really the essence of the whole thing, show the new records, not-



ably motor cycle, 1:10 2-5, C. H. Metz; gasoably motor cycle, 1:10 2-5, C. H. Metz; and gasolene, 1,000 to 2,000 pounds, 1:017 3-5, by Percy Owen, in a Winton. It is also notable that in the steam class S. T. Davis, Jr., with a Locomobile, of course, did 1:12, surpassing his previous public best of 1:15.

CLASS I-MOTOR BICYCLES. First trial.

	Mile.	K'metre.
Entrant and vehicle. h.p.	m. s.	m. s.
C. H. Metz (Orient)31/4		0:43 3-5
Former record, 1:35.		
CLASS III—GASOLENE (under 1,	.000 lbs.)
First trial.		
L. S. Thompson (Ren-		
ault)8	1:54 1-5	1:17
H. W. Leonard (Knick-		
erbacker)8	1:46	1:05 1-5
Ward Leonard Elec, Co.		
(Knickerbocker)4½	1:58	1:07 3-5
Lewis Nixon (Long D.)7	1:48	1:062-5
Second trial	l .	
L. S. Thompson (Ren-		
ault)8	1:35 3-5	0:59
H. W. Leonard (Knick-		
erbocker)8	1:45	1:05 3-5
H. W. Leonard (Knick-		
orbocker) 414	2.03	1.15 2.5

Lewis Nixon (Long D.)..7



S. T. DAVIS IR .. - 10 H. P.

Percy Owen (Winton)15 1	:25 0:52 3-5
F.A. LaRoche (Darracq).16 1:	:44 1:05:3-5
Second trial.	
J. Seligman (Mors)12 1	:32 3-5 0:57 1-5
Percy Owen (Winton)15 1:	17 3-5 0:47
F. A. LaRoche (Dar-	
racq)16 1:	:40 1:03 3-5
Former record, 1:53 3-5.	
CLASS V-GASOLENE (ov	er 2,000 lbs.)

First trial. Wm. Guggenheim (Pan-0:440:59 3-5 CLASS VI-STEAM. S. T. Davis, Jr. (Loco-0.46 1.5 1:01 1-5 0:36 1-5 Motor bicycles. C. H. Metz (Orient..... .1:102-5Gasolene under 1,000 lbs. . .1:35 3-5 Percy Owen (Winton).... Gasolene, over 2,000 lbs. Britton and Levy (Mors)..........0:55 1-5 Steam. S. T. Davis, Jr. (Locomobile)... BEST TIMES SCORED FOR KILOMETRE Motor bicycles. C. H. Metz (Orient)..... Gasolene, under 1,000 lbs. Casolene, under 1,000 los.

L. S. Thompson (Renault).......0:59
Gasolene, 1,000 to 2,000 lbs.

Percy Owen (Winton)......0:47
Gasolene, over 2,000 lbs.

Britton and Levy (Mors)......0:34 4-5 Steam. S. T. Davis, Jr. (Locomobile)......0:46 1-5 Baker M. V. Co. (Baker)......0:36 1-5

Some of the Constructional Details of the Baker Car.

All talk of the "freakishness" of the vehicle is nonsense, born of a lack of knowledge of its real construction. As a matter of fact it was, save in appearance, as far removed from the freak class as it was possible for any car to be. A brief resumé of its principal constructional details will make this plain:

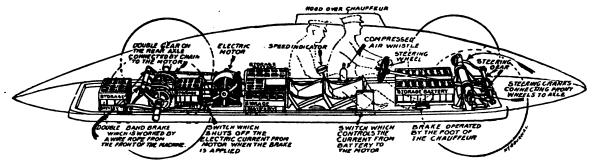
1:43 3-5 1:03

With the spookish-looking top, made of wood, painted black and pointed at both ends—the inverted canoe, as it was well

There were forty cells in the battery, and the total weight of the car, with the two men in it, was about 3.100 pounds.

That the object sought, stability, was obtained is borne out by the position of the car after the accident. It was right side up, and with the exception of one wheel, which was completely smashed, intact. A new wheel and half an hour's work on it would have fitted it for running again.

This car its designer and maker had tested time and again, and in every conceivable At the point where the accident occurred they were lined up rows deep, encroaching on the road down which the flying vehicle came. When the occupants felt rather than saw that something was wrong they acted quickly. The power was shut off, the brakes applied, and even at the tremendous speed and with the awful handicap of a broken wheel the machine was brought to a stop within an area that should have been clear and free. Had it been so nothing serious would have occurred.



APPROXIMATE DETAILS OF THE BAKER ELECTRIC "TORPEDO."

strong resemblance to the Riker electric, which was the sensation of the Coney Island trials held last autumn. On four large wheels—40 inches in diameter—entirely covered with black leather shields, was placed framework carrying the batteries, transmission, steering and braking devices, two men and various other implements needed in the trial. The men entered through a hole in the top. The batteries and other weight containing parts were carried well down, the idea being to obtain a low centre of gravity, and thus insure stability. The long wheel base—nine feet— also made for this stability, dubbed—removed, the car bore a remarkably

manner. Both Baker and Denzler knew it and its capabilities. It could not break, it could not overturn, it could not get beyond control. The steering, the braking, the power—all were time-tried and known to be perfect. All that was needed was an approximate perfect road. The power and the speed, together with the skill to use them, were ready.

In fact, the only thing that could not have been guarded against was present, and it was the rock on which the carefully built-up edifice struck and went to rack and ruin. That was the presence, the too close presence, of hundreds of spectators.

Super-Excellent Management.

The super-excellence of the management was comment-arousing and commented on. From the yellow arrows which blazed the way from St. George ferry to the tightly sealed entrances to the course, which was for the time as impregnable as the rock of Gibraltar, to the arrangements for timing, signalling and patrolling the road, everything had been foreseen, planned and carried out. It were hypercritical to criticise these details.

To perpetrate a bull, nothing but a squad of soldiers could have kept an American crowd, such as was present, in its place,





Published Every Thursday

By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING. 154 Namau Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

London Office, 53 Fleet Street, Paris Office, 2 Rue d'Abbeville,	:	:	C. V R. F.	V. BR COL	ROWN. LINS.
Subscription, Per Annum [Postage	Pa	nd]			\$2.00
Single Copies [Postage Paid] .				10	Cents
Foreign Subscription					\$3.00

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The Goodman Company.

General Agents: The American News Co., New York City

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the facilities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N.Y. Poet Office, November, 1000.

NEW YORK, JUNE 5, 1902.

The Staten Island Tragedy.

The tragedy attending the Staten Island speed trials is doubly deplorable. Deplorable because of the loss of human life, deplorable because of the fuel it added to the fierce flames of denunciation which have marked the anti-automobile crusade which has swept and is sweeping this and other portions of the country.

We cannot see that blame attaches to a living mortal identified with the contest. The accident was simply one of those that humans could not foresee or prevent. All that men could do to safeguard the affair was done by the promoters. All that was possible for a clear headed man to do to avoid accident was done by Mr. Baker himself. He shut off power, applied the brake and with rare presence of mind guided his crippled and careening car from the right, where the crowd was densest, to the left, where there were fewer people and where an "aisle of safety" promised.

The facts that the vehicle was of unusual design and appearance and that the trials were

held on a public road have given the antis and moralists rich food for digestion. Although for many weeks previous they were aware that such a course had been chosen, they saw no sin and uttered no protest. But with magnificent hindsight born of the fatality, their protests now are loud, if not deep. To the vehicle itself they fasten the term "freak." But had there been no accident and had the "freak" accomplished its purpose, nearly if not all of the editorial preachers who now denounce would have sounded the praises of American invention and performance until they reached the skies.

The accident, as is ever the case, merely changed the point of view. Success meant laurels: non-success censure

Of Baker and the reason for his creating such a vehicle, no rightful statement has yet been made. Records were not his objective. He believed and designed to demonstrate publicly that high power was not necessary to obtain speed. He believed that it was the method of applying the power that is largely responsible for results. It was a scientific study that he hoped to spread before the world.

Had he succeeded in proving how enormous is the wastage of power through unscientific design and application, who will say that Walter C. Baker might not now be crowned with the fame and laurels of a discoverer—of one who has contributed to the world's advancement?

Cruel fate interposed, but while mere babblers babble let no fair and thinking man forget or lack appreciation of the object for which Baker strived and the purpose which he nimed to serve.

In the demonstration a human life—yes, two human lives, were sacrificed—sad, very sad. But is not it history over again? No doubt a thousand ships were lost before Columbus "discovered" the New World—our world. In rich ored mines hundreds of thousands have perished, yet are they still worked. The aeronaut, seeking kingdom of the air, how often has he found death? Yes, 'tis the law of nature: "Ye shall seek; ye shall find; but many of ye shall die. I am to be unriddled, conquered and my secrets laid bare, but only through sacrifice."

As to the "Soap Box" Battery.

The automobile world has heard too much about the wonderful "soap box" electric battery upon which the Wizard of Menlo Park has been engaged for some time not to take the periodical stories about its revolutionizing characteristics with several grains of salt.

The subject is one which the lay mind is peculiarly apt to view askew. The "soap box" proposition is such a fascinating one, so far-reaching in its ramifications, so destructive of preconceived ideas and present practices, so ideal a solution of a problem surrounded with huge difficulties, that the exaggeration of a step or two in the desired direction into the reaching of the ultimate goal is an almost foregone conclusion. It happens, therefore, that whenever the matter comes up the cry goes forth that everything is over but the shouting.

Such has been the case this time. The first wildly sensational and palpably distorted reports turn out to be compounded of one part truth and four parts fiction.

The "poor man's" automobile is just as far off as ever, for instead of being cheaper, the new battery, when it gets on far enough to be pronounced a commercial article, will be more expensive than the one now in practical use. Furthermore, no particular effort is being made to cut down the cost. It is felt, probably, that a good article is worth a fair price, and that the concern which brings out a superior electric battery need not worry about its sale.

But the "soap box" battery is frankly admitted to be in the experimental stage as yet. It has made an advance. Practical trials, it is claimed, have yielded good results. But the tests made fall far short of being exhaustive, just as their results are a long way off from being revolutionary or even epoch making.

It is very plain that progress in the storage battery field is going to be gradual in its nature. Much has been accomplished in the past year or two, and the work now being done, coupled with the high standing of the workers, augurs well for the future.

It will be no summer's campaign, however. Of that all concerned may rest assured. The storage battery—and, consequently, the electric vehicle—of to-day is a long way in advance of what might reasonably have been expected in the not distant past. It is not going to be beaten out of sight this year or next, and there is not the slightest need for anxiety or uncertainty on the score.

Soiling a Clean Record.

If it were not for the "before" and the "after," the non-stop contest of the Automobile Club of America could be written an almost flawless event.

The arrangements for the start, the finish of



the run and for the guidance and safeguarding and convenience of the participants—in-

deed, everything affecting the actual conduct of the run was of high order and well nigh perfect. Coupled with the strict observance of the laws respecting speed and of all other ethics and courtesies of the road and of sport the contest was marked out for unusual distinction. How or why the promoters permitted or committed such a gross violation of the rules of fairness as a private and prearranged assignment of certain observers to certain cars, the observers being personal friends of the car owners, is incomprehensible. It violates the first rule of sport—a fair field and no favor—and is almost unpardonable. The high character of the club and of the gentlemen sportsmen immediately in charge of the affair should have been sufficient guarantee against such an offence and the perpetration of such malodorous favortism and underhanded practice. The fact that no harm resulted, or rather that there is no means of proving that harm resulted, does not mitigate the sin. It was

The unwarranted delay in announcing the awards is likewise difficult to understand. We can call to mind no other sport which requires a week's time in which to arrive at a decision, and there is no reason why it should longer remain the case in automobiling. Half the value of an event is its news value. Staled sport, like nearly everything else that is staled, loses half its point and interest.

unworthy of the organization.

In the case of the non-stop contest there were no percentages to be figured, no intricacies to be unknotted, no kinks or creases to be smoothed out. It required but a few hours' work to discover which vehicles had stops charged against them and which had none. It would seem that two fifteen-year-old boys should have been equal to the task. If the men in charge of the contest "had their livings to make" and could not devote their time to it they might at least have employed the boys and paid them out of the receipts from the event, which were certainly ample for the purpose.

In sport there is no room for red tape and circumlocution. Whether the Automobile Club thinks so or not, sports promoters and promoters of public events of whatever sort owe something to the press, public and participants alike, and that something is a fair decision and one that is as prompt as it is fair.

How Conditions Vary.

That it would not do for all men to be of a mind has been remarked by more than one sage, and nothing can be truer than the observation.

Its aptness is proved anew by the curious way in which the automobile strikes a responsive chord in certain cities or towns, and leaves untouched others, which, from their propinquity, like character, etc., would naturally be expected to be similarly affected. In the former the motor vehicle flourishes like the green bay tree; in the others the presence of a few cars simply shows that the species is not altogether unknown there.

In the former class may be mentioned such cities as Portland, Me.; Boston, Mass.; Providence, R. I.; Springfield, Mass., and Hartford, Conn. New York is, of course, pre-eminent in this respect, and Philadelphia shows up well, while Pittsburg and Washington are relatively far in advance of Baltimore. Chicago has only recently shown a predilection for the motor car, Cleveland and Detroit having a good lead over it. New Haven, Conn., which we should naturally expect to be well represented, has few automobiles, while Worcester, Mass., has done only fairly. Cincinnati and Indianapolis are good recruiting grounds, but Milwaukee and Louisville hold aloof. Denver and San Francisco show up well. The list might be continued almost indefinitely, but the places mentioned are sufficient to show the widely varying conditions.

It is, of course, only a question of time when all this will be changed, and the communities now backward will awake to the benefits—both utilitarian and pleasurable—conferred by the motor vehicle.

The Future of Alcohol

In one respect the alcohol cause has been furthered by the French races which took place a few weeks ago. That is to say, these races gave the fluid which is set up to compete with gasolene an opportunity to show just what was to be expected of it in the future. Other trials have taken place, but none on such an extensive scale or under such auspices as was the case on the Northern Circuit. Hence it is possible to arrive at tolerably definite conclusions, from which the future can be pretty confidently predicted.

Compressed into homeopathic proportions, the matter resolves itself into a question of economy. Price, and price alone, will decide the question, will incline the scales toward alcohol or gasolenc.

With engines specially designed to use alcohol, or with alcohol mixed with gasolene in the proper proportion, there is little to choose between, the two fluids yielding results which do not differ materially. There is no superiority in alcohol, nor can patriotism be counted on to make up for any deficiencies that may be properly chageable to it. It must be at least as good and as cheap as gasolene, or 't will not make headway.

The matter of cost is one that is completely under the control of the government. If it so wills alcohol can be placed on the market at a figure that will insure its speedy substitution for gasolene. Without action on its part, however, without a very material reduction in the alcohol tax, the attempt to do so is certain to end in failure.

If, therefore, in the light of the trials the government decides to place the tax on alcohol at a figure that will enable it to be manufactured and sold at a price considerably less than gasolene, there is little doubt that the latter will ultimately be driven out of the French market. Manufacturers will set about producing devices that will be especially adapted to use alcohol, and the trade and public will devote itself to the task of obtaining the best possible results from them and the favored fluid.

Something of the sort has already taken place in Germany. There gasolene is even more expensive than in France, while its importation affects the sensibilities of the German patriots—agrarians and others—and impels them to seek a home product with which to drive the motors.

Notoriously deficient in some of the descriptive terms necessary to describe automobiles and automobiling, the French language is yet peculiarly endowed with respect to others. A case in point is the word "chassis." The word is the equivalent for our running gear or under frame, as well as for the engine or motor. No similar comprehensive term exists in our language, more's the pity.

It is perhaps too much to hope that automobilism shall be free from the class of individual who recks little and cares less for the rights and comfort of others. There are too many such misusing motor cars. All the more reason, therefore, why the better class should take heed that their skirts are clear, and frown upon the acts of the lawbreaking element.



HOW IT HAPPENED

The Story of the Staten Island Tragedy—Baker's Quick Wit and Prompt
Action Averted Worse Disaster.

How, in the speed trials on Staten Island, on Saturday, the Baker electric car, or "road torpedo," as it was dubbed, dashed off the road and plunged into a crowd of spectators, It was uncanny, unearthly, Jules Verneish.

Strapped inside the vehicle were Walter C. Baker and C. E. Denzler, Baker at the steering wheel, Denzler sented close behind him, with his eye on the tachometre or speed register. His duty was merely to keep Baker informed of the pace.

Save for the babble it created as it passed, the car's flight was without incident. It reached the kilometre mark in 0:361-5—a

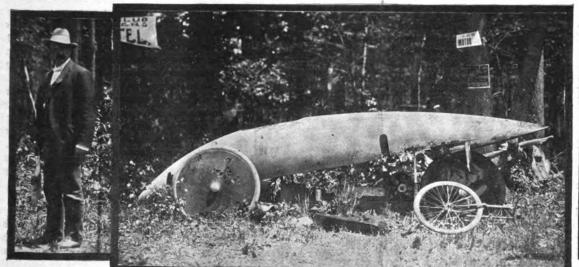
THE CAR IMMEDIATLY AFTER THE ACCIDENT.

shattered and pinned to the ground beneath the heavy axle and twisted spokes was a blood covered but still conscious man, who, however, died the next day. A bicycle, the owner of which miracuously escaped, was also beneath the wreck.

Baker and Denzler were still within the vehicle, at which policemen at once began to batter in order to release the man. When finally released they were found to be comparatively unhurt. A lump on Denzler's

DID HE SEE THE TRAGEDY?











From the Tribune.

THE RED CROSS TENT.

killing two and injuring six, has been told and retold many times and in many ways the length and breadth of the land. In itself a tragically sensational accident, the sensational build and character of the racing vehicle but served to multiply the sensationality.

Twenty-five trials had been already made over the mile course before the Baker essayed its flight. All who witnessed the flight testify to weird sensations. The sight of the big, black, sharp nosed, silent beast fairly skimming the road apparently of its own effort and without visible sign of human guidance, was calculated to inspire such sensations.

AFTER THE CAR HAD BEEN DISMANTLED.

0:58 mile pace—and negotiated the long curve just beyond-it seemed clear of it and fairly on the finishing straight when a cloud of dust at the right hand side of the road was observed and the crowd there swayed backward. As quickly the vehicle veered diagonally to the other side of the road, crossed the street railroad tracks which were in its path and, still head diagonally, plunged into a group of spectators at the roadside, instantly killing one man, injuring four others and also two women. Before it come to a stop the car described a half circle and brought up, still upright, with its prow pointing in the opposite direction from which it had been moving. Its right rear wheel was head, where he had been struck by a club in the policemen's effort to break open the hood was the most serious injury either man sustained. Baker, barcheaded and coatless, immediately walked to the finishing tape to reassure his wife, who awaited him there in an automobile. Later both men were arrested, and after spending the night under guard at a hospital were released on cash bail. On Monday they were exonerated by a coroner's jury, but the District Attorney of the county is not content, and they are due to present themselves to-morrow to the Grand Jury.

Devoid of sensationalism and verbinge, only what has been described and stated was seen and is known to the onlookers. The



search for the cause or causes of the accident has given rise to a full harvest of statements, alleged statements, guesses and rumors. From the personal observations of five members of the Motor World staff, who were on the spot, two at the finish, two near the scene of the accident, and one still nearer to it, and from interviews with Mr. Baker, with M. L. Goss, the manager of the Baker Co., and Mr. Baker's right hand man, and with other friends of Baker, it is plain that no one cause, but a variety of causes contributed to the tragic result.

Mr. Baker, in a general way, ascribes it to his belief that the vehicle was too fast for the road. His keen eye and a preliminary canter convinced him of the fact before the trial was fairly on. As a result and although the car was equipped with forty cells, he applied but half power and called but twenty of them into use. The road and the curve in the road—a gentle curve at slow speed—played their full part.

The road itself is of macadam, the centre, about 12 or 14 feet in width, being highly crowned and falling away sharply on either side. Its surface is not exactly marble-like. As in nearly all roads of the sort the broken stone protrudes here and there above the surface. In their desire for smoothness the promoters had the road swept with brooms, and this sweeping served only to defeat the object. It caused the stones and more of them to protrude the more—it made the road rougher rather than smoother. When the very first vehicle made its trial the effect was apparent. Its bouncing was a subject of running remark.

When the Baker "t rpedo" rounded the curve there was the natural tendency to swing wide, and while opinions may differ on the point, it did appear and seems plausible that after straightening out, the "off" wheels of the Baker left the crown of the road. The effort to regain the centre, coupled with the "bouncing" caused by the road's roughness, slewed the vehicle to the right. where the crowd was densest. Baker, quick as a flash, figured it all out. He shouted a warning "Hold fast!" to Denzler, shut off power, put the brake hard on, the sudden application crushed the right rear wheel. causing the cloud of dust which every one noted. Mr. Baker's presence of mind did not desert him for a moment. He quickly steered the now crippled and careening, but still swiftly lunging, vehicle sharply from right to left diagonally across the road. He hoped to be able to bring it to a stop before he reached the spectators on that side. But his hopes were vain. Three yards more and he probably would have succeeded, as the vehicle went just about its own length-nine feet-on the greensward before it stopped its death dealing plunge.

Low Consumption Rumor.

It is given out unofficially that one of the White cars consumed 5½ gallons of gasolene and 6½ gallons of water on the run, a remarkable showing.

BAKER: HIS VEHICLE

Something About the Man and the Far-Reaching Purposes he Aimed to Serve—Mere Records not his Object.

Of the Baker electric racing car, which made such a sad history on Saturday last, and the man responsible for it and his reasons for creating it, so many conflicting stories have been printed that to the uninformed the sifting of the true from the false is a hopeless task.

That the car was the invention of Walter C. Baker, the president of the Baker Motor Vehicle Co., Cleveland. Ohio, has been heralded to the four corners of the earth. W. E. Denzler, who was his car mate on the occasion of the accident, is the chief electrician of the company. Both are calm, cool, clear headed men. Mr. Baker has ben interested in automobiles almost from their inception. He has owned some fifteen different vehicles,



WALTER C. BAKER.

and few men, if any, are more skilful or competent in their guidance. At Detroit last fall he won an obstacle race in a fashion that left no doubt of his ability in that direction.

Although president of the company which bears his name, his particular concern is the mechanical development and perfection of the product. The commercial details of the company are intrusted to M. L. Goss, who came on from Cleveland to witness the demonstration, and who was one of the first to reach his chief after Saturday's tragedy. Mr. Baker is the most modest and undemonstrative of men. He is content to bury himself in his inventive work; it is rare indeed that he appears in the foreground.

The racing car is a creation of his brain. It has been building since last fall, and represented an outlay of \$20,000. The reasons for its construction were deeper than appeared to the mere reader of surface indications. What these reasons are were unfolded by Mr. Baker in an interview with a Motor World representative. He said:

"I do not care a snap of my finger for records, but I wished to satisfy myself, and in time possibly the public, that my theory of applying power is correct; that it is not essential to have too great power to secure great results. Or, in other words, it has been my theory and practice in the manufacture of automobiles to secure the greatest possible results from comparatively little power. Such a result I believe I have secured, not merely by guesswork, but by most careful calculations and based upon the accepted laws of motion, atmospheric pressure and mechanical resistance. I believe in a small motor and little battery equipment. That from two to four times as much horse power is used as is necessary. Hence, to prove my theory I constructed the racing machine and carried its lines to the extreme. The lines of this racing car were as carefully considered as the designs for the swiftest yacht, while the mechanical parts show precision, perfect alignment and even balance. Anti-frictional devices have been my life study, and all I have learned in a long mechanical experience has been applied to this car. The motor had a normal rating of 7 h. p., but we developed to 12 h. p. in working up to high speed. In my belief the speed did not result from mere multiplication of power, but by reduction to the minimum of atmospheric pressure and mechanical friction."

The car was equipped with one of Mr. Baker's anti-frictional inventions, the Baker ball bearings. It also employed an Elwell Parker motor and a Whitney roller chain. How great was the interest in the objects that Baker had in view was attested by the presence at the trials of Manager Phillips, of the Elwell Parker Electric Co., and Clarence A. Whitney, of the Whitney Mfg. Co., the one journeying from Cleveland and the other from Hartford for no other purpose than to witness the demonstration that promised so much and terminated so tragicany.

A. C. A. Whereases and Resolves.

There will be no more automobile speed trials on public roads in this vicinity if the inhibition of the Board of Governors of the Automobile Club of America carries with a the expected weight.

The Board met on Tuesday afternoon, and after considerable discussion unanimously passed the following resolution:

Whereas, The Automobile Club of America deeply regrets and deplores the terrible accident which occurred during the holding of the record trials by this club on Staten Island on May 31 last,

Resolved, That, although similar trials have been heretofcre held throughout the world without serious accident, yet this accident upon Saturday, notwithstanding every safeguard that precaution could suggest was adopted, has convinced the governors of the club that it is unwise to hold speed trials with automobiles on the public highways, and that the governors of this club will not hold or consent to the holding of such contests by the club.—Resolution adopted by governors of Automobile Club of America.

Although nothing authoritative can be learned regarding the matter, it is reported that so strongly did the deplorable occurrence of Saturday affect some members of the Board that they endeavored to have the scope of the resolution extended so as to cover all racing, whether on track or road. This effort was defeated, of course.

MAKING THEIR LIVINGS—Continued From Page 287.

and politely ask that the press, public and participants be damned. When they—the promoters—"find time" they will compile and announce the results—not before. They may find the necessary time next week or the week after.

As one member of the contest committee suavely expressed it, they "have their livings to make." The \$750 which were paid into the club's coffer as entry fees is not a part of these "livings," and presumably it is not

was no shadow of excitement or anything approaching it, and but little of interest or incident to mark the event.

The day was almost ideal. A little less wind, a little less dust, and it would have been quite ideal. Nature had forestalled man and arrayed herself for a holiday. The blue sky, the clear atmosphere, the genial warmth of the sun, the freshness of all growing things after the welcome rain of a few

would seem to imply a wholesale slaughter of the striving ones, but the fact that many of the stoppages noted were on account of tire troubles softens the statement materially.

In the absence of official data regarding the winners of non-stop certificates, extensive comment on this feature cannot be made. The best obtainable reports place the number of such winners at from 24 to 27 or 28, the latter being the unofficial estimate of Chairman Scarritt on Wednesday. At best

Unofficial Summary of Results.

		GASO	LENE.		,					1
Entrant and vehicle.	Start. A. M.	Finish. P. M.	50 miles. P. M.	Elapsed time out.	Elapsed time back.	Elapsed total time.	Penalized stops.	н. Р.	Weight.	Passen- gers.
F. A. La Roche (Darracq)	9:01:00	3:46:00	12:24:20	3:23:20	3:21:40	6:45:00	0 1	9	1.250	2
C. D. Cooke (Darracq)	9:02:00	3:46:30	12:25:05	3:23:05	3:21:25	6:44:30	0	9	1.250	2
H. W. Whipple (Packard)	9:05:00	3:50:30	12:29:15	3:24:15	3:21:15	6:45:30	1 1	12	2.200	4
Knox Auto, Co. (Knox)	9:09:00	3:51:00	12:33:30	3:24:30	3:17:30	6:42:00	0	6	1,400	2
Alex, Fischer (Georges-Richards)	9:11:00	3:51:30	12:42:50	3:31:50	3:08:40	6:40:30	1 1	10-12	1.200	4
	9:09:00	3:52:00	12:33:40	3:24:40	3:18:20	6:43:00	0	6	1,400	2
Knox Auto. Co. (Knox)	9:12:15	3:53:00	12:35:40	3:23:25	3:17:20	6:40:45	0	12	2,100	6
Jefferson, Seligman (Mors)	9:02:00	3:56:00	12:36:40	3:34:40	3:19:20	6:54:00	0	8	2,500	4
E. B. Gallaher (Fournier-Searchmont)	9:04:30	3:56:15	12:34:20	3:29:50	3:21:55	6:51:45	1	12	2,100	9
Adams & McMurtry Co. (Packard)		3:57:30	12:33:55	3:24:10	3:23:35	6:47:45	0 1	12	1,400	2
Knox Auto. Co. (Knox)	9:09:45		12:38:00	3:34:00	3:19:45	6:53:45	0	0		-
R. A. Greene (Fournier-Searchmont)	9:04:00	3:57:45		3:28:55	3:19:20	6:48:15		10 10	2,500	4
C. J. Field (Georges-Richards)	9:10:30	3:58:45	12:39:25	3:32:30	3:25:00		0	10-12	1,200	4
E. B. Gallaher (Fournier-Searchmont)	9:02:00	3:59:30	12:34:30			6:57:30	0	8	2,500	4
Wm. Morgan (Autocar)	9:13:30	4:00:15	. 12:38:10	3:24:40	3:22:05	6:46:45	0	81/2	1,200	2
A. J. Lamme (Long Distance)	9:08:15	4:01:45	12:45:10	3:36:55	3:16:35	6:53:30	0	7	1,200	2
J. F. Hovestadt (De Dion-Bouton)	9:04:00	4:07:15	12:38:10	3:34:10	3:29:05	7:03:15	0	16	1,700	4
Ward-Leonard Elec. Co. (Knickerbocker)	9:06:00	4:10:30	12:38:59	3:32:59	3:31:31	7:04:30	1	5	1,000	3
Wm. N. Beach (Mors)	9:14:15	4:12:45	12:45:17	3:31:02	3:27:28	6:58:30	3	16	2,200	4
Geo. Arents, jr. (Panhard)	9:03:45	4:13:15	12:44:58	3:41:13	3:28:17	7:09:30	1	12	2,600	4
Peerless Manufacturing Co. (Peerless)	9:12:45	4:18:00	12:46:15	3:33:30	3:31:45	7:05:15	2	16	1.700	2
A. N. Tatum (Darracq)	9:01:00	4:18:30	12:41:45	3:40:45	3:36:45	7:17:30	3	9	1.300	4
Haynes-Apperson Co. (Haynes-Apperson)	9:11:15	4:23:15	12:48:10	3:36:55	3:35:05	7:12:00	0	9	1,950	2
Automobile Co. Am. (Gasmobile)	9:14:45	4:28:45	12:39:20	3:24:35	3:49:25	7:14:00	2	.12	2,500	2
Adams & McMurtry Co. (Packard)	9:04:00	4:43:30	12:43:15	3:39:15	4:00:15	7:39:30	3	16	2,100	2
Adams & McMurtry Co. (Packard)	9:05:45	4:50:00	1:05:34	3:59:49	3:44:26	7:44:15	0	10	1.650	4
Lane M. V. Co. (Lane)	9:16:00	5:13:00	1:14:08	3:58:08	3:58:52	7:57:00	2	7	1,400	2
I. W. England (Long Distance)	9:07:15	6:19:00	1:27:58	4:20:43	4:51:02	9:11:45	3	5 1		-
Ward Leonard Electric Co. (Knickerbocker)	9:07:15			4.20.40	1.01.02	0.11.40	1 0 1	0	1,050	4
		STE	AM.							
Overman Auto Co. (Overman)	9:00:00	3:56:30	12:34:10	3:34:10	3:22:20	6:56:30	0 1	41/2	1,500	2
M. R. Hughes (White)	9:09:15	3:57:00	12:36:30	3:27:15	3:20:30	6:47:45	0	6	1.400	2
Locomobile Co. Am. (Locomobile)	9:01:00	4:03:00	12:35:40	3:34:40	3:27:20	7:02:00	0 1	31/2	1,250	2
W. H. Wells (Prescott)	9:06:15	4:04:00	12:55:59	3:49:44	3:08:01	6:57:45	1 0 i	4 1/2	1,300	2
H. M. Wells (Prescott)	9:06:00	4:04:15	12:55:58	3:49:58	3:08:17	6:58:15	0 1	4 1/2	1,300	2 2
Grout Brothers (Grout)	9:07:00	4:15:15	12:37:40	3:30:40	3:37:35	7:08:15	0 1	4 1/2	1,000	2
Locomobile Co. Am. (Locomobile)	9:00:00	4:16:15	12:38:50	3:38:50	3:37:25	7:16:15	i o i	31/2	985	2
Locomobile Co. Am. (Dicomobile)	9:08:15	4:19:00	12:45:25	3:37:10	3:33:35	7:10:45	ŏ	6.2	1.400	2
Paul H. Deming (White)	9:08:45	4:27:15	1:00:55	3:52:10	3:37:05	7:28:15	1 1	414	1.300	2
W. T. White (White)	9:06:30	4:34:45	12:57:40	3:51:10	3:26:20	7:18:30	1 6 1	.67	1.400	
F. E. Magee (Prescott)	9:07:45	5:18:00	12:38:05	3:30:20	4:39:55	8:10:15	1 1	61/2	1,300	2 2
Grout Brothers (Grout)	0.01140	9.59:00 1	12.00.00	0.00.20		0.10.10	1 4 1	072	1,300	2

to be paid out in the furtherance of prompt and efficient service.

The start of the contest was not unlike the starts of all other events of the sort. The competitors were sent away at intervals of thirty seconds. Before the start, however, a very conspicuous flaw in the arrangements developed. After Chairman Scarritt had made his little speech to the observers, impressing them with the fact that the legal limits of speed must be observed, the cars were apportioned the observers "by lot," Mr. Scarritt called it. It soon came out, however, that there were numbers drawn for which no cars had ever been entered, and about the same time it developed that a "reserved list" existed. This contained the names of their personal friends whom the owners of certain cars had been permitted to select to accompany them as observers.

The contest itself was like and yet unlike all of the previous events of a similar character. Like, in that the scenes along the road were similar to the scenes which marked the previous affairs; unlike, in that it was over an out and home course, and that no excessive speeding or other law violations marked the entire day. This very unlikeness made the event tame and colorless. There

days before—all these helped to make the day one to remember long.

It seemed as if all humankind was awake to the inspiration of the day and in fit mood to the inspiration of the scene and in fit mood rial Day. Bands and marching men, flying flags and banners and pursuing boys were seen in many places. In every town and village along the route the news of the run had preceded it, and preparations had been made to view it to the best advantage.

The course from New York to near Bridgeport and return was unquestionably a much more severe one than that on Long Island. Its hills, both long and short, heavily graded and slightly sloped, had something to do with this. The character of the roads was also a factor. They were stone roads in the main, and there were patches of new metal to lend additional severity to the task of traversing them without accident.

The severity of the course accounts for the large number of casualties, most of them of a minor nature and many of them due to tire troubles.

The extent of the mishaps may be seen when it is stated that one Motor World observer counted seventeen vehicles stopped by the roadside and passed by his car. This

this will give 50 per cent of the starters—not a bad showing, everything considered. Indeed, it is considerably ahead of any thing yet recorded here.

Of the 55 starters 49 passed the turning point in ample season, and 38 performed a like feat at the finish. Again this is a high mark, and indicative of yet greater advances in efficiency and reliability.

The names which stand out most prominently on the roll of honor are the Whites—which scored their usual and complete success—the Knoxes, which made an equally meritorious record; the Locomobiles, the Prescotts, the Darracqs and the Fournier-Searchmonts. One of the latter balked on Putnam Hill, owing to a badly working clutchfi and the Haynes-Appersons for the first time in a long series of contests parted company, landing in both the winning and losing classes. Except the Darracqs, most of the foreign cars made rather a sorry showing. An object of interest was the Coffee gasolene six seated surrey, dubbed the "Coffee-mill," but it came to grief very early in the run and ceased to grind, as it should have done.

At exactly 3:46 the first returning car, a Darracq, reached the finishing point, coming into the roped off inclosure at 60th street, east of Fifth avenue. Here also was the scene of the consumption test, the tanks being filled with gasolene and water. Following the Darracq came its mate, and then the others followed in a pretty steady stream until 5:18, when the count was ended.



The Motor Morid.

HALF-WAY POINT

How the Contesting Vehicles Flade the Turn at Green's Farms—Viewed by Many— Some Scenes and Incidents.

A turn had to be made, and made without stopping. That was the condition that confronted the club, and perhaps the one at



THE TURNING POINT, 50 MILES.

Green's Farms was the best available spot. It certainly had no other recommendation than the one of affording a little more room than a single road would have given.

At this point the Shore Road is bisected by a companion bearing the euphoneous name of the Turkey Hill Road. The former rose to the occasion, a fairly sharp little rise, perhaps a 4 or 5 per cent grade. Teams coming from the Turkey Hill Road, south bound, sometimes turned into the Shore Road headed in the direction of New York; and in doing so they took a short cut, this cut forming one side of a triangle, the other two sides being made by the tracks of the Shore Road and the Turkey Hill journeyers, headed north. Over this triangle the sauntering non-stoppers were directed to run.

The first vehicle was scheduled to reach the point at 12:20—if it left New York promptly at 9 o'clock and took not more than a second over the minimum time allotted to it.

Long before that time, therefore, every vantage point surrounding the triangle referred to was pre-empted. The representatives of the Automobile Club of America were ready and waiting—lusty youths, full of spirits, stealing a few minutes between times to chat with the maids who were not too bashful, and steadied by a sedate Scotchman, time sheets in hand and brimful of recollections of the days when he reported Gladstone's speeches in Mid-Lothian in '81. This delegation attended to business when there was any to attend to, and skylarked in the intervals.

Next in importance—in one sense pride of place should be accorded them—came the delegation of the Automobile Club of Bridgeport. A parade through the town, a run to Westport and return to Green's Farms had

taken place, and the club was ready for the tid-bit of the day. The monotony was varied by dashes up and down the road, accompanied with cries of "Here they come," to be proved false alarms, swapping of stories, etc.

The people of the countryside were also awake to the import of the day. In carriages and wagons, and on foot, they came and bestowed themselves on the brow of the hill, at the sides of the roads and even in an adjoining orchard—anywhere where there were shade and a good view.

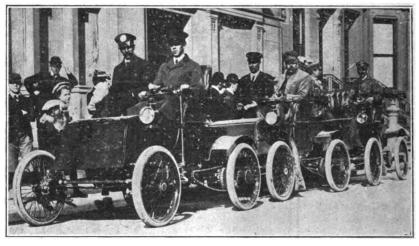
At the northwest corner of the road was a yellow diamond, formed of two triangles of tin and nailed to a tree. Below it was a a canvas sign reading: "Fifty Miles; Turn Here." A scant quarter of a mile down the road was stationed a man with a green flag, the eight miles an hour signal, and at the top of the hill another one with a white flag to mark the boundary of the slow control.

At about 12:23 the first car, No. 28, hove in sight, and making the turn in fine style, was clocked at 12:24:20. It was closely followed by a second, No. 27, which rounded at

Beyond this there were no mishaps or stops of any kind, if the exploit of the observer on one of the Ward Leonards be excepted. Something was wrong with the high speed, and it was "out of business." The car crawled along on the slow speed, and the little rise was taken so slowly that it looked as if the car would stop, so the observer jumped out and gave the vehicle a push, carrying it over the brow.

Skilful driving and some that was not so skilful was witnessed. Some operators slowed and made the turn with exceeding care, while others took it with a recklessness there was no occasion for. There was a sort of dry ditch inside the triangle, and into this some of the cars plunged with a bump that threatened to break springs or do other damage. But nothing of the kind occurred, and as soon as the cars were straightened out on the main road their speed was increased, and they sped for home with right good will.

It was just 2:32:20 when No. 12, the Pierce motorette, made the turn, and as a telephone message from Mianus made it plain that but



THE LINE UP OF THE KNOXES.

12:25:05—thus two Darraeqs, which were almost the first to get away at the start, captured the honors at the fifty mile turn, and this with a little time to spare. It was more than four minutes later before the next arrival put in an appearance, this time a Packard, and four minutes after it came the three Knox cars in regular order, seconds apart. A steamer, first of its class, a Locomobile was the next comer, to be followed by a long string of vehicles in almost unbroken line for the next ten minutes.

So closely were they bunched that no less than nineteen vehicles made the turn inside of six minutes. At one time four cars were together, and when the leader, a Fournier-Searchmont, slowed, consequent upon its operator's throwing in the slow speed to make the turn, the second car, an Autocar, was forced to stop so suddenly that the car behind it, a De Dion, bumped into it and came to a stop also. These were, of course, nonpenalized stops, and were so entered by the officials at the turning point.



MEASURING THE CONSUMPTION

one of the vehicles leaving there was unaccounted for, the Motor World man boarded a trolley car, trainward bound. In all fortyeight vehicles had made the official turn, leaving seven of the fifty-five starters missing.



ON PUT'S HILL

How The Contestants Negotiated the "Rocky Steep" Made Famous in the Revolution — The Hesitants.

It fell to the lot of at least one Motor World representative to be disappointed all around in the affair of the endurance run. It was his plan to "float" back and forth ters was long on observers and short on "ships." Previous applicants were drawing blanks and some of them "blanking" the results.

Just as hope was sinking to its lowest level the remembrance came of a previous trip to the hill made famous by Israel Putnam's ride "down its rocky steep." If any point could furnish sightseeing, that, at least, ought to serve. Between railways and trolleys it was reached in ample time. Shortly appearance was one of the Grout steamers, B5, which showed up at 10:56 a. m. By 11 o'clock, that is, inside four minutes, eleven vehicles had put in an appearance. In the next fifteen minutes twenty-nine more had started down the hill on their way to the turn. Then came the first wait of over a minute, the next vehicle coming into view three minutes later. Eight minutes now went by with nothing doing, followed by six vehicles at one minute intervals. The next



GENERAL VIEW AT THE STARTING POINT.

over part of the course in an independent vehicle, with the idea that good items would thus be found to make mighty interesting reading. Many things were possible, and with a camera accompaniment a good article was dreamed of. It was only a dream, however, as just before starting the differential went wrong and time was not to be had in which to right matters.

Hurrying to the starting point with the hope that an observership could be angled for at the last minute, was the next move, only to have another setback. Drawing a number by those already listed was one round badge against the field. Headquar-

after arriving the appearance of at least a dozen other lookers-on proved that the writer was not alone in his inspiration, particularly as no less than three of them were grumbling at their luck in drawing numbers representing non-starters.

In the illustrations showing the hill little idea can be gained of either the grade or the surface. According to the official map it is the steepest hill on the course, the grade averaging 13 per cent. The surface is loose except in spots and for a short distance near the top and over by the north side of the road.

On the run out the first vehicle to make its

four used up one hour and five minutes of waiting, the difference in time between the next to the last and the last being thirty-five minutes. This made a total of fifty-one vehicles and the hour 12:42 p. m.

The only occasion that gave promise of seeing somebody in trouble was when an observer, on one of the six vehicles which passed at one minute intervals, shouted out, "There is a breakdown back there." Hurrying up the hill and on for perhaps an eighth of a mile the Mors, carrying card A8, was found pulled up by the side of the road. A request for information as to the cause was met with a refusal—one of those silent affairs

that mean the more because so little is "said." The sotto voce remark that while the observer's badge was not visible, undoubtedly the report as to the cause would be, and that because of this there could be no harm in giving information and no good done in withholding it, brought out just another silent look.

Collateral evidences in the way of a bucket with some water left in it pointed to the very simple condition of a hot engine. This was all that offered itself, as the vehicle was off just as the last silent answer had been given.

By this time the audience had been added to, perhaps the most notable being two who had come out to see what a certain vehicle they had in mind to buy would do on the hill climb. They waited until somewhat after 3 o'clock when they started home, probably not to buy, as the expected did not happen so far as they at least were concerned.

Whatever hope there had been that the hill would furnish excitement in the way of groups, with possible struggles to pass one another, and thus show superiority as hill climbers, was shattered, as the vehicles were so strung out in passing.

Seemingly no attempts were made to rush the hill and all went up on their low gear with perhaps one exception. This exception was a 16 h. p. Packard, which took all but the last twenty-five feet of the hill on the second gear.

The first vehicle to put in its appearance was A28, the Darracq, driven by F. A. La Roche. The hour was 1:38 p. m. Five minutes afterward the next vehicle appeared, then a wait of two minutes, followed by another of seven. During this latter it was noted that a Fournies-Searchmont was having minor trouble with its speed gears long before it reached the hill. This had its effect on climbing the hill, and near the crown it became necessary to throw out the clutch and let the vehicle run back for about ten feet, when the clutch was thrown in again and all was well.

A few minutes after this a Gasmobile was stopped about half way up, due to a cracked porcelain in one of the three spark plugs. The operator while replacing it said he had been running for miles on two cylinders, but that it was too much to expect that this hill could be taken under the conditions. Naturally annoyed at being stopped for the first time for so trivial a thing after pluckily sticking to it for so so far, he promised his observer some speed now that a stop penalty was a gainst him.

Then a few more passing vehicles at intervals went up the hill without trouble, until a light Darracq, with three passengers, stopped for just the wink of an eyelash. Just why it stopped was hard to tell, as just as one of the passengers got out the vehicle started up and on again.

Then at intervals varying from half a minute to thirteen minutes half a dozen passed up without difficulty, until a Locomobile was obliged to halt because the air pressure had been allowed to fall too low. The operator

got out and walked the balance of the hill.

Larger waits was now the order, when, just as this unofficial observer was about to leave, the Pierce motorette came up the hill at low speed, but without a hitch. Inquiry developed that the vehicle had been travelling from the twenty mile point on the low speed gear.

As it was now after 5 o'clock and the schedule showed that over a dozen vehicles were yet to come after a further wait of thirty minutes, the trolley and train were taken back to the city, in the mean time wondering what had happened to the delinquents.

What he Really Meant.

Again Thomas A. Edison, the "Wizard of Menlo Park," has been betrayed by the indiscreet utterances of his too zealous friends. He did not make the extravagant claims put in his mouth by nearly every metropolitan journal last week, is not going to revolutionize the motor vehicle industry and place automobiles within the reach of the poor man; does not regard his electric battery as a complete success ready for the market, and intends to put it through a lengthy novitiate before he asks the public to invest in it.

Writing to the Motor World under date of May 29, the Edison Storage Battery Co. say:

"We are not yet ready to put the new Edison storage battery on the market. We are, however, operating automobiles, and it may be of interest to you to know that our first run with the commercial battery, which was made over a succession of grades, ranging from 2 per cent. to 12 per cent., gave us a mileage of 62 miles, with over 80 per cent. of the general speed at the end of the run. A second was made over more level roads, the vehicle was run to a standstill and the cyclometer registered 85 miles.

"We do not care at present to give any figures as to cost or as to the date when we shall be able to put them on the market. We are about to put batteries in six or eight types of automobiles, ranging from this small runabout to a three-ton truck, and shall give each an endurance test of five thousand miles before giving them to the public. We expect the batteries to be in as good condition at the end of the endurance test as they are when they are first put to work."

In an interview published in the Herald—and warranted to be genuine this time—the cheapness item is exploded, and the admission made that the new battery, instead of being cheaper than those now in use, will be more expensive. This is what Mr. Edison claims for his battery: That it will occupy about the same space as the present battery, that it will weigh only about 70 per cent. as much and that it will be more durable.

This is a vastly less ambitious programme than was given out last week. One hundred miles on one battery charge is a good run. but it has been accomplished by the Electric Vehicle Co., to mention only one worker in this field.

OBSERVER'S STORY

Queer Things he Discovered Before the Start and What Caught his Eye, Ear and Fancy En Route.

When I arrived at the room in which the drawing for observers was to take place, an acquaintance stopped me at the door and a colloquy of about the following tenor occurred:

"Going?"

"Yep."

"Got your vehicle yet?"

"No"

"Any one in particular you'd like to get?"

"Why? Can you fix it?"

"I might. I'm waiting to see Mr. ——. He fixed ——— last night, and I expect him to do the same for me. If you wish, I'll ask him to provide for you as well."

I declined the offer, and elected to take my chances.

About a half hour later Chairman Scarritt made his little speech to the assembled observers, informing them that the contest was not a speed trial, and that the laws must be strictly observed. He added that the drawing of observers would be "by lot." The big celluloid badges bearing the number of the vehicles were strewn face downward on a table. As each observer's name was called an attendant picked up a badge, and in this way the lots were decided. My name was well up on the list. No. 8 was the vehicle which I drew. It proved to be W. N. Beach's 16 h. p. Mors. When I located Mr. Beach and informed him that I was due to spend at least six hours and forty minutes in his company, he did not appear to in the least relish the information.

"I cannot understand it," he stated. "Why, I had my friend here, Mr. ——, assigned to my carriage more than a week ago."

I exhibited badge No. 8 as evidence that, despite the prearranged assignment, his vehicle had fallen to my lot.

Mr. Beach and his friend were distinctly perturbed. They quickly sought out Mr. Scarritt. Scarritt was not perturbed. Beach recited how his friend had been privately assigned to him the week before, but Scarritt was disposed to wave him aside. Mr. Beach was insistent.

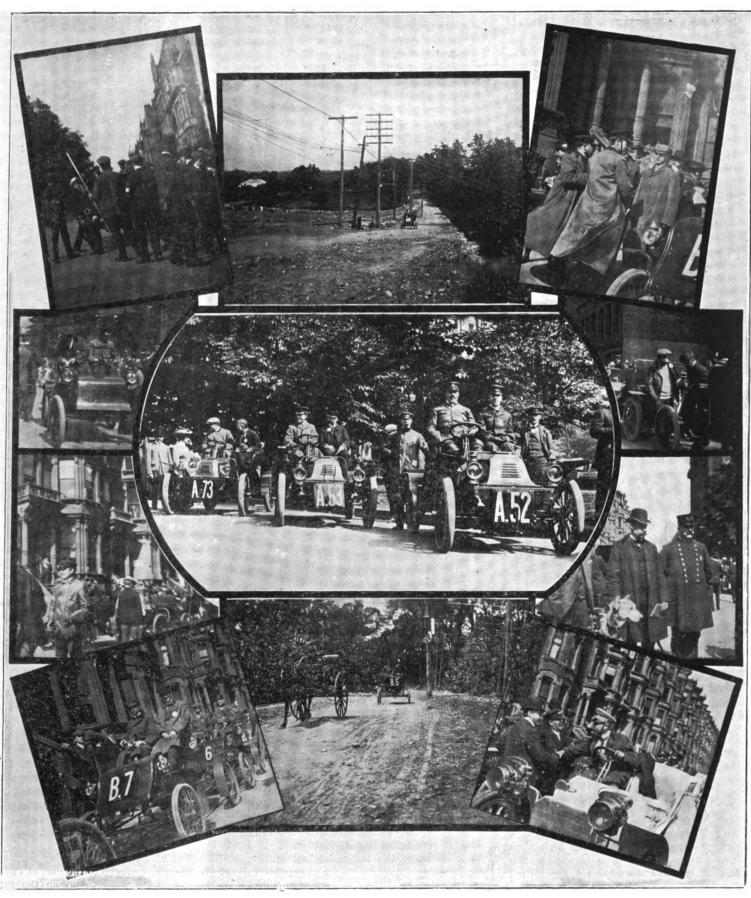
"Are you sure he was on the reserved list?" asked Mr. Scarritt, thumbing a typewritten list. "I can't find him here."

Mr. Beach's disturbance increased. He wanted his friend to ride with him, and wanted him badly. Scarritt finally informed him that if he could reach a "mutual agreement" with the openly appointed observer there would be no objection.

After some little palaver, I agreed that if the friend, that is, the observer by private arrangement, could find me a car that met with my pleasure I would agree to an exchange. After the lapse of a few moments he returned with No. 46 in his possession,

(Continued on page 302.)





WATCHING THE FIRST DEPARTURE.

AN OBSERVER POSTING HIMSELF EARLY TO ARRIVE AT THE START.

THE LINE-UP OF THE PRESCOTTS.

F. F. WESTON AND H. T. DUNN TALKING TIRES.

F. A. LAROCHE, (DARRACO) FIRST UP PUTNAM HILL.

CONCERNED ABOUT HIS TIRE.

THE THREE FOURNIER-SEARCHMONT ENTRIES.

H. R. H., THE POLICE CAPTAIN, VIEWS THE SITUATION.

GROUT, THE FIRST DOWN PUTNAM HILL.

JEFFERSON SELIGMAN TELLS A GOOD STORY.

SOLUTION IS DEFERRED

Of the Alcohol Versus Gasolone Problem— Northern Circuit Races Undecisive— Story of Farman's Victory.

French Bureau Motor World,

2 Rue d'Abbeville.

Paris, May 20.—The employment of alcohol for automobiles was supposed likely to make a great step in advance as the result of the tests and race being organized by the Minister of Agriculture, but now that these are over it may well be asked whether the spirit has shown up so well as would seem to be justified by the propaganda being carried out it, its favor.

Certainly alcohol has done well, and has shown that it is entirely suitable for motor carriages, but the question lies not so much in its suitability as in its economy. It must be greatly superior to gasolene, or else cheaper, if it is to come into general use. Even the strongest advocate of alcohol will not go so far as to claim any superiority for this spirit, and the question is, therefore, whether it can be produced and sold at such a low figure as to warrant automobilists in using it instead of gasolene.

CONSUMPTION APPRECIABLY HIGHER.

Any further reduction in the price of alcohol is a problem for the future. At the moment the Minister of Agriculture is only desirous of seeing, first, whether the spirit is suitable, and then ascertain the proportionate consumption of alcohol and gasolene, so as to fix a limit at which the agricultural spirit must be sold in order to compete with the imported product. The programme of the Northern Alcohol Circuit started with a test of industrial vehicles from Beauvais to Paris, a distance of fifty-eight miles, when the consumption of each vehicle was carefully measured. They all used alcohol carburetted with 50 per cent of benzine, with the exception of the Peugeot van, which employed pure alcohol, and this was the only vehicle that failed to complete the journey. The principal factors considered in this test were regularity of running and economy, and, so far as the regularity was concerned. alcohol seemed to compare very favorably with gasolene, for all the vehicles went over the course without difficulty, except the Peugeot, which broke down about eight miles from Paris.

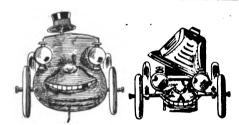
The results of consumption merely confirmed previous tests by showing that, while the vehicles behave as well as with gasolene, the consumption is appreciably higher, and it may be taken that the motors use up from 15 to 20 per cent more alcohol, according to the type of the engine, for some are much better adapted for running with this spirit than others

As a rule, the slow running horizontal motors come out best with alcohol, and in the high speed vertical engines of the Panhard type there is a much bigger margin,

sometimes amounting to as much as 25 per cent. It is quite possible that by modifying the motors the consumption of alcohol can be reduced, that is to say, modifying them in the sense of utilizing the longer expansion of the spirit, but in this event the motors would not be so efficient with gasolene, and it therefore appears as if the gasolene and alcohol motors of the future will be entirely distinct,

CONDITIONS YET TO FULLFIL

So long as automobilists are able to use gasolene they are not likely to employ motors specially designed for alcohol, and if this spirt is to come into general use it must be sold at such a figure as to compete with gasolene under present conditions. Its cost must be reduced at least 20 per cent, and, instead of selling at nine cents a litre, it should be priced at seven cents, which is still higher than in Germany, where the spirit has become almost universal on account of the heavy import duties on petroleum and the low excise taxes on the agricultural product. The public in Germany use alcohol because they cannot get anything cheaper. In this country the preblem depends upon an



IS MY BONNET ON STRAIGHT?

entire reorganization of the fiscal system, and it is probable that this is what the government had in mind in promoting the series of tests and races last week. It is clear that alcohol will become the question of the future, and that in course of time it will be used to the almost entire exclusion of gasolene, but this will only be done by forcing alcohol upon the public, for they will never employ it so long as they can get gasolene at the same price. Alcohol has no advantage in point of efficiency, and at present its cost is actually higher.

ORGANIZED TWO SEPARATE EVENTS.

The Minister of Agriculture was not content with carrying out scientific tests, but tried alcohol under every possible condition of automobilism, and, while organizing a consumption test for touring vehicles through the northern departments, ran off a race of speed vehicles which naturally eclipsed everything in the programme. The consumption of the industrial and touring vehicles was all very well for the engineers who wanted to study the economy of alcohol, but the public looked for something more exciting, and they got plenty of sensation in the big race which was run off on Thursday and Friday.

Not since automobilism became a sport have we had to wait until so late in the year

before having a race of some sort or another. The suppression of the races down south in the spring was going to be compensated for by the Nice-Abazzia event, and when this was prohibited the outlook was none too cheerful for the sport. All the makers had racing vehicles on their hands, except for a few favored firms who had disposed of them at fancy prices after the sensational performances down at Nice, and they were glad to have an opportunity of showing what they could do with alcohol in the Minister's competition.

Every one of the Nice vehicles were entered for the Northern Circuit, and makers pushed forward with the construction of their Paris-Vienna vehicles in the hope of having them ready. Unfortunately Panhard et Levassor could only enter one of these powerful new automobiles, which was driven by Chevalier de Knyff, but, having left the works at the last moment, it was not in proper racing trim, and M. de Knyff spent most of his time on the first stage in loking after his clutch, which was constantly slipping, and prevented the vehicle from doing justice to itself. As it was hopeless to continue under these conditions, the more so as repairs could not be carried out during the night, M. de Knyff decided not to start on the second day. This was the more to be regretted, as the new Panhard is a magnificent vehicle, with a motor developing up to about 75 horsepower, and there is no doubt that it is exceedingly fast. Panhards, however, ran their Nice-Abazzia type of vehicle, of which we recently published an illustration, and it was with this that Maurice Farman won the race.

WHY FOURNIER DID NOT START.

Mors were unable to compete in the Northern Circuit, or, at least, they ran one vehicle, which was driven by Baron de Caters, and came to grief soon after the start by breaking a wheel. Henry Fournier was also to have driven a Mors, but was unable to start, owing to a slight derangement to the vehicle. The other Mors racing machines were not ready, and thus we have nothing to go by to show the capabilities of these new vehicles. They develop about 20 horsepower less than the new Panhards, but is is claimed that this is more than made up for by the new system of direct transmission on the fourth speed, which does away with any loss of power through intermediate gearing. The only foreign vehicle competing was a Mercedes, driven by Mr. W. K. Vanderbilt, jr., but he seems to have been in distress soon after the start, for he did not reach the first control where the passage of the vehicles had to be officially notified.

The start took place on Thursday morning, at Champigny, a suburb to the east of Paris, and the vehicles were to go on the first stage to Arras, a distance of 255 miles, by way of Châlons-sur-Marne, Rethel and Saint-Quentin. At 4 o'clock Chevalier Knyff was sent off with his big Panhard, and then followed, at intervals of two minutes, half a dozen other Panhards, three of them of the



Nice-Abazzia type, and driven by Maurice Farman, Charles Jarrott and Teste. Darracq had six light carriages, and the Decauville company five, while there were also half a dozen Renault voiturettes. Gardner-Serpollet ran four steam cars, with burners adapted for using alcohol, for it was indispensable that this spirit should be used. Altogether fifty-six vehicles were started in the race.

SHOWERS AND HEAVY GOING.

The day had opened with a drizzling rain, and later on there were heavy showers, which made the going very heavy in parts, but, on the whole, the conditions were not unfavorable for the racing machines. M. de Knyff was soon in difficulties with his clutch, and then Maurice Farman went ahead, steadily increasing his lead on Marcellin, who was driving a Darracq, and Jarrott, who had to stop several times to clean out his carburetter and change the sparking plugs. On a part of the course the going is very dangerous, with sharp turnings and steep down grades, and several vehicles came to grief, though none of the drivers met with any injury, and, in fact, during the whole race there was an entire absence of serious accidents. All the towns were neutralized, when the automobiles had to go through at walking pace, and every possible precaution was taken for the safety of the public, the approach of the vehicles being announced by the firing of bombs and the sounding of bugles, and the road was kept clear by a strong force of soldiers and police. The Minister of Agriculture had gone to Arras on a special train, accompanied by a large number of automobilists and journalists, and on getting to the control outside the town we had not long to wait before a bomb was fired and Maurice Farman came flying along, bareheaded and without spectacles, the state of his vehicle showing that there was plenty of mud along the road. He had covered the 255 miles in 4h. 55m. He had driven all the way without a single incident and without a stop, except when going through the controls.

THE FIRST DAY'S FINISHES

There was a wait of more than half an hour for the second arrival, and then came Marcellin with his Darracq, who had taken 5h. 26m.; Louis Renault in 5h. 35m., Jarrott in 5h. 43m., Henry Farman (light Panhard) in 6h. 1m., Osmont (De Dion tricycle) 6h. 2m., Bardeau (De Dion tricycle) 6h, 13m, Guillaume (Darracq) in 6h. 14m., Albert Collins (Darracq) in 6h. 17m., Edmond (Darracq) in 6h. 23m., Marcel Renault (Renault) in 6h. 23m. 35s., Chanliaud (Serpollet) in 6h. 26m., Rutishauser (Serpollet) 6h. 40m., and then followed others at more or less regular intervals until 23 arrived out of a total of 56 starters. Apart from the performances of the Panhards and the Darracqs the feature of the race was the excellent behavior of the Renaults and Serpollets, which all finished in very creditable time. This is the first time that steam vehicles have shown up to such good advantage in long distance races, and

the result is due to the system of condenser fitted by M. Serpollet to his vehicles, which allows of their running the whole distance without stopping to take in supplies of water

On the second day the race was from Arras to Saint-Germain, by way of Boulogne, Abbeville and Dleppe, a distance of 318 miles. A heavy rain had fallen during the night and continued all through the day, and the stormy weather, with high winds and hail, made it extremely uncomfortable for the automobilists, while the roads were in a deplorable condition. Many of the vehicles were unable to continue, and several of them came to grief through skidding on the greasy roads and breaking wheels or in other ways getting damaged. Under these circumstances it was hardly to be expected that the average speed would be so high as on the previous day, and on certain of the roads along the coast racing was so dangerous that some of the competitors gave up the contest in despair.

STRUGGLE FOR SECOND PLACE.

One who had particularly bad luck was Edmond, who lost a bolt in his Darracq when he had a long advance on the other light vehicles, and had to give up between Abbeville and Dieppe because he could not replace it. Maurice Farman continued to increase his lead, and the struggle was confined to Marcellin and Jarrott for the second place. The Englishman's Panhard was much the faster vehicle, but he was constantly stopping to change his plugs, and just when he was catching up with the Darracq he fell back again. The Darracq kept the second position all the way to Mantes, and it seemed to have a strong probability of finishing second. At Saint-Germain the arrival was awaited with considerable interest by a large crowd of spectators, who heroically faced the stormy weather, and it was not until nearly 2 o'clock that Farman at length appeared, finishing with his vehicle completely smothered with mud. He had taken 11h. 56m. to cover the full distance of 573 miles, and though his average of 471/2 miles an hour is below the record, it is nevertheless remarkably good in view of the conditions under which the race was run off.

Fifty minutes afterward Jarrott arrived at full speed and threw an inspector of police off his legs. As Marcellin was close behind he was afraid to stop too suddenly for fear of a collision, and pulled up at some distance beyond the control. Marcellin came in a few seconds afterward, and just missed the second place, which was won by Jarrott by 12s. It is rare that two vehicles finish so close together after a race of nearly 600 miles, but it is certain that the Panhard would have done much better if it were not for the defective plugs.

MARVELOUSLY CLOSE FINISH.

Then followed Henry Farman (Panhard), Rutishauser (Serpollet), Grus (Renault), Bardeaux (De Dion tricycle), Oury (Renault), Rigolly (Gobron-Brillie), Condoin (Panhard), Barbaroux (Clement), Cozic (Dechamps), Le Blon (Serpollet), Tart (Clement), Chanliaud (Serpollet), Ducros (Panhard), Barbereau (Serpollet), Guillaume (Darracq) and Cormier (Renault). The first steam vehicle did the full distance in exactly 16 hours, and the other competitors ranged up to 21 hours. Altogether 19 finished, so that the percentage of failures was pretty considerable.

WEATHER INTERFERED WITH ONE TEST.

In the consumption test of touring vehicles the course was covered in three stages, and on the first day the automobiles went by a short cut to Arras, which reduced the distance to 130 miles, and then they continued to Abbeville and finished at Paris, or rather some of them did. On Thursday the weather was, on the whole, favorable, and only half a dozen vehicles were unable to get to Arras, most of these meeting with trouble through trying to go at too high a speed. On the second day the majority of the tourists found that the stormy weather was too much for them, and it was so cold and wet and windy that they dropped out one by one until only nineteen reached Abbeville.

Patriotism was all very well in trying to solve the alcohol question, but most of the automobilists wanted the spirits inside them, and with the wind and rain fighting out a battle they thought it prudent to retire. The rain got the best of the encounter the following day, for it simply fell in sheets, and the fifteen automobilists out of forty-seven who were courageous enough to continue, or had the luck to escape misadventure, ran into Paris, wet and bedraggled, glad enough to get to the end of such a journey. Though so few finished, they have nevertheless presented some interesting data as to consumption, and now that the Minister has found out what he wanted to know he will go right ahead and do what he can to settle the alcohol question for the benefit of a national industry.

MAY BRING ABOUT PARIS-VIENNA RACE.

The alcohol race has already had one good result: it has brought the Minister round to a more favorable view of the sport of automobilism. With so many racing vehicles driven at top speed over such a long course, not a single serious accident has been recorded, and this shows clearly that the danger of racing is much exaggerated and that it may be entirely eliminated by taking proper precautions. The Minister has stated that after this experience the government may be disposed to look favorably upon the forthcoming Paris-Vienna race, and he has invited the Automobile Club to present a plan of the course with a view of seeing whether the race can be sanctioned through France. Arrangements for Paris-Vienna are now being actively pushed forward, and there is every prospect of the government sanctioning the race, in which event there is not likely to be any trouble with the German and Austrian authorities. The success of the alcohol race has made the future of the sport much more hopeful.



OBSERVER'S STORY.

(Continued from page 298.)

It proved to be the Columbia electric, the only entry in that class. As I indirectly knew H. W. Alden, the operator, I swapped badges. A box of compound cathartics could not have added more to the relief of both Mr. Beach and his friend. I cannot say that I regret the exchange. Alden proved a capital companion, and although disappointment was his store, it detracted little from the pleasure of the run, from my standpoint at any rate.

We had not left the asphalt of Fifth avenue before we met the first unfortunate—Windsor T. White and his famous White steam carriage. He was bending over a tire. Near the Bronx we met and passed the next one, A24, one of the Ward Leonard Knickerbockers. It was in trouble, but was still moving. The observer was at the steering wheel, and the operator, pliers in hand, was working at something near the bonnet of his vehicle. Twice we passed and repassed each other, and on each occasion the operator was doing the steering. On Pelham Road another White, B64, was having trouble with its tires.

Before we reached Greenwich we passed police innumerable—the course seemed lined with them—and seven other cars in trouble of some kind, one of them Jefferson Seligman's big white Cannstadt-Daimler (A14). Mr. Seligman and his party did not appear to mind the stop. There were no long faces among them. Seligman himself was enjoying a good laugh.

On top of Put's Hill, going out of Greenwich, there was a vehicle that interested me more than any of the others—A8, W. N. Beach's 16 h. p. Mors. Mr. Beach, his observer-friend and his two chauffeurs—he had two of them—were having trouble, and not tire trouble, either.

Did the occupants of C46, Columbia electric, give the Beach party the laugh?

They did-a regular horse laugh.

It was "sweet revenge." Alden shared it. He knew Mr. Beach's friend.

"I'll never let up on him now," he ventured.
"If we do not go another mile, passing them
will be satisfaction enough for the day."

At the Mianus control batteries were exchanged. The new set should have arrived there the night before. They had arrived only that morning. The manner in which the information was imparted to Alden conveyed doubts to my mind.

Before we had left Miams two miles behind us Alden remarked:

"That battery's sleepy. We'll never pull through."

I supplied an infusion of hope, and the sight of a Ward Leonard Knickerbocker being pushed up hill by its observer caused us to forgive our doubts. The man-pushed Knickerbocker was a frequent sight on every grade thereafter. The observer was a big, strong man. About the same time we commenced to have a tilt with I. W. England's Long Distance carriage. It was able to

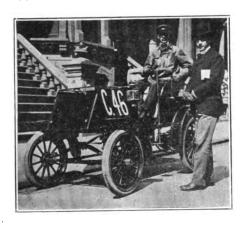
move, but not very swiftly. The engine was pounding and giving out a metallic ring. Time and again we passed England. We both little more than crawled up hill. On the level England would pull away from us, but down hill the big electric would fairly bowl over space and overtake him. It happened so often that it became a laughing matter, although England appeared serious and never once turned his head. Finally he drew away from us "for keeps," and the "sleepy" motor once more became a matter of concern. It betrayed its weariness on the grades. Between Greenwich and the turning point we passed six disabled vehicles-seventeen in all in the fifty miles. As we crawled up the hill at the turn and followed the graceful circle which the checker at the top described, he inquired:

"What motor is it?"

"Edison's latest," he was informed.

It was a baid lie, of course, but apparently he was none the wiser.

We bowled down the hill in fine style, but



THE LONE ELECTRIC ENTRANT.

each succeeding grade added to the weariness of the battery.

"I'm afraid we're done for," ventured Alden. "Charge me with a stop and I'll oil up."

But the stop and lubrication served no purpose. The battery was almost sound asleep. It would propel the vehicle on the level, but after trying the hill out of Westport and failing we headed for the electric lighting plant for a recharge. It was a mile off the course, and after going half the distance a hill interposed, and again the hill won. We retraced our route. A native informed us that there was an electric launch factory about a mile away. We headed that way, went two miles and found—a naphtha launch plant, closed and deserted.

The railroad time table then became an object of interest.

Refused to Sanction Meet.

The American Automobile Association and the National Automobile Racing Association have locked horns, and first blood has been drawn by the first named organization. At the monthly meeting of the board of governors of the latter, held on Tuesday afternoon, the application of the National Association for a sanction for a race meet to be run at Brighton Beach on June 21 was received and rejected.

England's Big Speed Trials.

In the presence of 12,000 people, and with 200 contesting motor cars, the most important speed trials ever held in England were run off at Bexhill on May 19. Although handicapped by a heavy track, due to severe rains the night before, this making sensational performances quite out of the question, the events were interesting and at times exciting.

A Serpollet "Easter Egg," a 40 H. P. racing Mercedes fitted with a weird looking, all-covering wind shield, three racing Darracqs fresh from "Bonnie France" and in charge of Gauls who knew but one word of English, viz., "Bexhill"—these with some cars of British manufacture were booked to do the thrilling act and give the spectators a "run for their money." But they could not get up full speed on the sticky track, and had it been dry, this would have been precluded by the sharp turns.

Management of a high order of excellence marked the meet. An electric timer was used, with telephones and messengers mounted on bicycles as adjuncts. The different cars were sent off expeditiously, and to this fact alone was the finishing of the events at a reasonable hour due.

The Serpollet carried off the honors of the day, making the fastest kilometre, viz., 41% sec., or 54.53 miles per hour. A 20 H. P. Darracq and a 40 H. P. Panhard tied at 43 sec., while the best one of the Mercedes could accomplish was 48 3-5 sec. A Locomobile finished third in the steam class.

The great blemish of the course was the curve at the finish. Though only a slight one at ordinary speeds, it necessitated something of a slack at really high velocities, and especially if the road surface should be in a slightly treacherous condition, as it may be after wet.

Steering Knuckle Patent Decision.

An important decision affirming the validity of the well known Elliott steering knuckle has been handed down by Judge Hazel of the United States Circuit Court for the Western District of New York. The case was that of the Electric Vehicle Co. et al. vs. the Conrad Motor Co. et al., and the subject of the litigation was that form of steering wheel suspension commonly known as the Elliott steering equipment, the patent for which was issued to Sterling Elliott in 1890 and assigned by him to the Electric Vehicle Co.

Under Judge Hazel's decree the exclusive right to manufacture and use the invention is vested in the Electric Vehicle Co. and its licensees.

Ownership of Porter Battery-

The ownership of the exclusive rights to the Porter battery by the Electric Storage Battery Co. has been affirmed by Judge Hazel, of the Western District of the United States Court, sitting at Buffalo. He granted the petition of the Electric Storage Battery Co., of Philadelphia, against the Buffalo Electric Carriage Co., restraining it from using what is known as the Porter battery, alleged to be an infringement of the patents of the complainant.



STEAMERS IN ENGLAND

British Conservatism Being Bumped by Practice and Common Sense.

There's the deuce to pay over in London, and the American steam motor vehicle is the prime breeder of the trouble, the fomenter of friction between automobilists and authorities.

Shall the vehicles referred to be permitted to show a visible exhaust to mark their trail and frighten horses and sensitive users of the streets? That is the question, a burning one, and one that is now up for settlement. An act of Parliament and British mossbackism stand on one side. Arrayed against them are actual practice and common sense. Which will win it is too early to say, but it's odds on the former combination, despite the fact that London is waking from its semislumber of centuries' duration.

A committee of the London County Council has recommended that the police be instructed to get the facts necessary for proceedings that relate to the visible steam exhaust and kindred evils.

Complaint is made that the steam from the American steam motor cars frightens horses. In the report of the committee the word "locomotive" is used, but this, it is asserted, includes motor cars of any weight. The text of the report follows:

Locomotives on Roads.—Emission of

Our attention has been called to the danger to ordinary vehicular traffic which exists in consequence of the sudden emission of steam from some locomotives using the roads. We have ascertained that the council has no power to frame a by-law in the matter, but that the existing acts of Parliament already deal with it.

As to locomotives which are not light locomotives.—Section 3 of the Locomotives Act, 1865, provides that the steam of a locomotive shall not "be allowed to attain a pressure such as to exceed the limit fixed by the safety valve, so that no steam shall blow off when the locomotive is upon the road." And there is a penalty provided by the act for any breach of this section.

As to light locomotives.—The Light Locomotives Act, 1896, provides that the enactments mentioned in the schedule to the act, which includes the Act of 1865, shail not apply to any vehicle propelled by mechanical power if it is under three tons in weight unladen. . . and is so constructed that no smoke or visible vapor is emitted therefrom, except from any temporary or accidental cause. If, therefore, a light locomotive be used, which emits steam, except as aforesaid, it would cease to have the protection afforded by the Act of 1896, and would be subject to the provisions of section 3 of the Act of 1865, as to the emission of steam.

We are of opinion that the emission of steam from locomotives using the roads is

very dangerous to ordinary vehicular traffic, and we think, therefore, that a communication should be addressed to the Commissioner of Pelice in the matter, with a view to any cases coming under his notice being reported to the council. We recommend:

"That a communication be addressed to the Commissioner of Police, asking him to inform the council of any cases which may come to his notice of the emission of steam from locomotives on roads, with a view to the council taking proceedings under the statutes referred to."

Hints on Tire Usage.

The unavoidable accidents to tires probably form but a small portion of the total number. In many cases users are careless or ignorant, and meet with mishaps that could be prevented by the use of a little foresight. In a little pamphlet they have gotten out the Diamond Rubber Company touch on this point.

"Our repair shops," they say, "report failures of tires chiefly due to drivers becoming careless of the air pressure—insufficient as a rule—driving fast over rough places, striking stones, thus rupturing the fabric; also using tires which have been ruptured or punctured. A tire cannot be ridden defiated any great distance without serious consequences.

"Therefore, never ride tires without inflating so that they stand up round under full load in motion. Every owner should possess a pump equipped with pressure gauge. Do not inflate tires with pump used to pump gasoline, and keep gasoline off the tires.

"Avoid large stones or obstructions because a sharp blow ruptures the fabric, and the tire looks to all appearances like a porous tire. A porous Diamond Tire is never delivered, because rigid inspection will discover it before delivery.

"We particularly caution you that in using your automobile during summer months to reduce the pressure in the tires, for the reason that the heat increases the pressure in the tires."

Laryngological Association's Discovery.

Foreign bodies in bronchial cavities was the subject of several of the closing papers read before the twenty-fourth annual congress of the American Laryngological Association at Boston last week.

Dr. Emil Mayer noted the increase in bronchial troubles and expressed his belief that the use of automobiles would cause a yet greater increase in the number of cases. The high speed attained by chauffeurs, he thought, was favorable to the entrance of foreign particles into the cavities.

The old axiom, "A stitch in time saves nine," is particularly adaptable to a motor vehicle, as many serious accidents might be avoided were a little timely care exercised in keeping the various parts in proper working order.

ERRONEOUS IMPRESSIONS

Dispelled by Familiarity with the Subject of Keeping Motor Vehicles Clean.

Owing to the careless way in which many motor cars are treated, they have become associated with the idea that they are necessarily dirty, and only fit for those who wish to go tearing around the country.

Many owners fail to recognize that their cars are depreciating very rapidly in value by not being properly cleaned. The mud is allowed to dry on the paint and leave spots, instead of being washed off immediately the car has returned to the coach house. The motor gets coated with grease and dust, and the car rapidly puts on a dirty and second-hand appearance. There are others who take a pride in their cars, which, after running many thousands of miles, look almost as well as they did the day they were turned out.

To remove dust from the paintwork a large common painter's brush is as good as anything; but in muddy weather a soft sponge with plenty of water should be used. The sponge should be plunged frequently into the water and "dabbed" on the mud; do not attempt to wipe it off, as this will scratch the varnish. When every vestige of dust has been removed, the car may be wiped down with a soft chamois leather. Neither the brush, sponge nor leather should touch any greasy part, or they will spoil the gloss of the varnish. Separate cloths or leathers should be used for the motor and the gearing, these parts being finished last, care being taken that no grit or dust be wiped into the bearings. It is almost needless to add that all lubricators, tanks, etc., should be closed during cleaning operations.

A little gasolene on the cloths in cleaning the engine greatly facilitates the removal of any grease. To clean the side chains use the same oil, well brushed in with a common paint brush. After having removed all the dirt and water from the car, wipe the bright parts with a rag having a little vaseline on it, and give the side chains a coating of tallow and blacklead, which can be kept ready mixed, and applied with a brush similar to that used for cleaning.

All dirt should be washed off the tires, and having dried them carefully, cuts and bad places should be cleaned out with gasolene or benzine, and then plugged and cemented with pieces of pure rubber and solution, so that they may be allowed as much time as possible to harden before being again used. On no account should a deflated tire be allowed to support the weight of the car. If it is not convenient to repair the tire at once, the weight of the car should be taken off it by a jack or other support. There is nothing worse for tires than to allow them to stand on greasy patches. As it is almost impossible to prevent oil dropping on the floor, it is best to get a sheet iron tray, about five feet long by three feet wide, having sides about one inch high, and slide this underneath the car as soon as it is brought in

To describe in detail the best method of cleaning a car doubtless gives an impression that it takes a great deal of time, more than most people could devote to the work; but it is surprising how quickly a motor car can be cleaned, if the few necessary appliances are kept in readiness for use as soon as it is housed after a run. A little care and time spent in the methodical cleaning of the car in the manner described is more than repaid by the absence of trouble and worry, and the comfort of knowing that all is right beneath one when riding along the road.

To Outwit Too-Officious Police.

One of the pleasant diversions of certain sections of the British police is the lying in wait for automobilists who are supposed (by the police) to be violating the speed laws and running at a rate in excess of twelve miles an hour.

One motor vehicle user is quoted as saying that there would have been no complaint if the police confined their efforts to trapping the few reckless drivers who rushed through towns and around corners to the danger of pedestrians and street traffic, but that when automobilists are allowed to be stoned with impunity, and have no redress because the policemen are withdrawn from the villages and hidden in hedges, ditches and cow sheds in order to trap the drivers on the straight, unoccupied portions of the country roads, the conduct of the police leads only to ridiclue and contempt.

On the return from the Bexhill races one member of the club found a policeman in a ditch and chased him to a cowshed, where he found him hidden in the manger. He took the policeman's number and telegraphed to the Chief Constable, reporting that he had found a constable under most suspicious circumstances, hidden in a cowshed, having a silver watch in his hand.

It is suggested that in the future when automobilists are about to make a journey they should travel in groups; that the leading automobile, if stopped by the police, should warn the next one, and the second should warn the third, and so on, and that the fine of the driver of the leading machine should be equally divided among the whole party.

Fighting the Dust Nuisance.

To lay the dust on French roads, a move rendered almost necessary by the great increase in automobile traffis, two methods, one; of them novel, are said to have been tried. The first was with petroleum applied by an ordinary sprinkling apparatus, which operation has proved successful.

Good results have also been obtained at Monte Carlo, where a layer of boiling coaltar has been put on a road. The expense of tarring a road fifteen feet wide was a little over \$60 per mile.

WHAT THE FUTURE HOLDS

Speculation as to the Effect of Improvements on Present Design.

"It is always a matter of absorbing interest to those who follow the development of the autocar at all closely to indulge in speculations as to what the next improvement will be, and to wonder how it will affect present design," says the Autocar.

"Of course, every one who knows anything about the motor is well aware of the fact that changes must come very slowly, and that while constant improvement will result it must be gradual, and it will only be by looking back for a considerable period that any vital changes will be noticeable, for many a change is made which is found not to be an improvement, and it is only when things have been thoroughly tested that manufacturers will attempt to alter their patterns. The omission to do this in the past has more than once resulted in much loss of capital, as well as dissatisfaction to purchasers, who, as a matter of fact, would have been better off with the older though tried types.

"However, by studying the machines of to-day carefully one may form some idea as to the future tendencies. At the moment there is an indication that as time goes on the control of the car will be more through the engine than it has hitherto been. That is to say, the engine will be driven rather than the car, for now, as every one knows, most machines are controlled almost entirely through the brakes, and not by the engine, though if the matter is considered it will be seen that high powers-engines of a great range of power and throttle controlhave gone a long way toward making it possible to drive the car to a considerable extent through the engine, thus approximating the control of an internal combustion car to that of a steam carriage.

"As the elasticity of the internal combustion engine is increased the transmission will become simpler, and, consequently, still more efficient, though few people realize the great advance which has been made in efficiency of gearing in the last two or three years. While it is true that the gear has not altered materially in principle, the improvements in design and the use of the very best material and workmanship have resulted in a far smoother running and less power wasting transmission than was the average, say, two years ago.

To return to the engine, it is only necessary to look back for a similar period to realize how much has been done in making it more and more elastic. In its crude form the internal combustion engine was practically useless except at one speed, and little or no variation could be made in the power given off. From this state its elasticity has been and is being gradually increased, and already we have petrol engines with a range

of power which would have been regarded as impossible a very short while ago, and all this has been done without in any way affecting the main principles on which the internal combustion engine is constructed.

"As an indication of the possibilities of the future, it is only necessary to imagine one of the latest pattern high-powered cars moderately geared. Such a car would take almost everything on its top speed, and with throttle control would run smoothly on the level, though not using half its power, and one reduction for starting purposes would probably also supply a gear sufficiently low to cope with any hill which could be found.

"On the other hand, there are many who believe that the car to come will have a system of infinitely variable gear, and that the development of the future will lie this way rather than in the evolution of the engine of remarkable elasticity.

"There is, of course, much to be said for the gear, which, while being to all intents and purposes variable from zero to the maximum by very slight graduations, shall also be efficient as a power transmitter, but it is not our point at the moment to discuss the merits of the two schools, but rather to note the present tendency, and that is unquestionably towards the variable engine rather than the variable gear."

Exactly Suits the Occassion.

Of doubtful origin, but clear cut and terse is the French term "en panne," meaning a breakdown. The words are simply French slang, and have some connection with "panné," meaning hard up, and is exactly equivalent to the English slang term "stone broke." "Dans la panne" is common enough to explain that a man is utterly without means, usually in the sense of temporary difficulties, and from this it is easy to understand how the term "en panne" came into being.

It is quite possible that "en panne" may have had a restricted employment before the advent of the motor car, and it has also been used among engine drivers to explain the breaking down of a locomotive, but it is only since the word became associated with the automobile that it has taken a definite place in the French language. Though the evolution of the word seems to be pretty clear, it was nevertheless a stroke of genius to apply "en panne" to automobile breakdowns, for there is really no other phrase which will so concisely cover all kinds of minor accidents.

It has a much wider meaning than the words "break down." A punctured tire or a broken chain, a hot bearing or a motor seizing is a "panne," and the word means, in short, any trouble or derangement which will prevent the car from running.

New Jersey Club Events.

Several events are projected by the North Jersey Automobile Club, Paterson, N. J., indicative of an active season. Among these are speed and brake contests and a 100 mile run, all to be held in the near future.





Because some of those who ride in automobiles have shown themselves capable of disregarding the rights and safety of others a feeling has unjustly arisen against the whole body of automobile travellers.

There is nothing wrong with the automobile, and the great majority of those who operate them are the same people who formerly drove along the roads. Nobody would ever think of hostility merely because a man was driving, and yet there have been more accidents from horses that got beyond control than from these machines, which are at least directly under the hands of the operator, and neither shy from a paper blowing down the street nor take fright and run away at an unusual sound.

When the bicycle first came into use careless riders and the same sort of people who now terrorize the countryside by thundering along the busy roads, enjoying the fright of those they scare, violating at once the laws of speed and of courtesy, made themselves terrible to those who had to move on the tracks they infested.

The laws and the force of public opinion corrected and suppressed the bicycle scorcher, just as they will keep within bounds the sporadic man who, intoxicated by the unaccustomed sense of rapid motion, has taken the place in popular disesteem of his almost extinct prototype of the early bicycle days.

There are no longer bicycle races nor horse races on public thoroughfares, and there must be proper restrictions for motor speed trials if they have to be held, so that the failure of a competitor to steer straight or the breaking of a machine will not imperil others than those who voluntarily take the risks of headlong speed, but it must be remembered that most automobiles are pleasure vehicles, and not racing machines, and the great majority of those who go along our highways in them are as considerate and careful as any other of the people of the roads.

By and by the automobile will become as common a mode of progression as the bicycle or the horse-drawn carriage, and people will wonder that there was ever anybody who objected to them, but until that time comes condemnation should be kept for the automobile rowdy, who is the natural prey of a policeman under any circumstances, and the rest of the motor carriage folk should emphasize the distinction between him and them by even an excess of

caution and consideration in their journeyings.—New York Journal.

The common-sense automobilist slacks up at the intersection of a street or when turning, but there are these others and they run their machines as though they and they alone had the freedom of the streets. The fine for violation of the law is not over \$200, but there is no imprisonment provided, and possibly those who can afford to own racing machines feel that they are willing as well as able, as the ownership would imply, to pay the fine for the fun they have and the notoriety they would obtain. Some of these scorchers evidently try to emulate certain of the Vanderbilts and Astors who have occasionally to pay for their little diversion.

One of the worst offenders against public decency in this respect is the owner and driver of a big French machine, who seems to entertain the notion that he owns the town when he is out riding and that everything must get out of his way. So far he has only run over a few dogs and chickens, which didn't get out of the way, and has not yet killed his man; but there's no telling when the expected may happen. This driver was recently called down by the president of the Automobile Club (which is particular about this thing) for his fast driving, and rather resented the suggestion that he should pay more regard to the law, if he didn't choose to regard the lives of his fellow citizens. He has already established a reputation for reckless driving which will last for some time, even if he should now adopt a slower gait in conformity to State law. He is noted for the speed of his machine and seems to delight in verifying the popular belief that it will travel at the rate of fortyfive miles an hour. If he should get into the trouble which he apparently takes no pains to avoid, sympathy would be confined entirely to his victim.—Hartford (Conn.) Courant.

The disposition to shy a brick at an automobile as it passes is growing, and it ought to be repressed. Sometimes the man behind the missile may deem his cause just, as did Jeromus Rapelyea, the old soldier of Newtown, Long Island, who struck Chauffeur Kennedy on the head with a lump of clay. Kennedy's automobile had crowded Rapelyea's carriage off the road and forced the old soldier and his grandchild to jump to avoid injury. Usually, however, the attack is wanton, as in the case of the East Side boys who stoned Banker Thomas and his bride Saturday. The desire there was simply to hit a moving target, as a leaping lion with a baseball at a Coney Island gallery. Boys attempting this kind of marksmanship are "unmitigated little loafers," as Magistrate Brann calls them, and deserve the full penalty of the law.

A development of interest from these street assaults is the Automobile Club's proposed formal request of the Police Department for better protection. If any part of the animosity against automobiles shown by stone throwing is due to a popular idea that chauffeurs have disregarded the rights of pedestrians, it is to be regretted that such a misapprehension should have arisen. The appeal of the automobilists to the law indicates that they are law-abiding themselves, and we cannot longer suspect them of violation of speed ordinances or other like offences.—New York World.

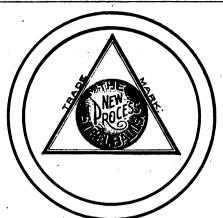
Just at present there is a great outcry against automobiles, and one of the New York yellows printed a list of fatalities attributed to the new motor carriages. The time covered was more than a year, and it took in the whole country. We will wager any amount that a similar list of accidents caused by horses, bicycles and trolley cars would make a much larger and worse showing. When first bicycles were introduced many people were hurt by horses shving at them. The same thing followed the introduction of the trolley. But nobody wanted to prohibit the use of bicycles or trolley cars. An automobile can be stopped quicker than any other vehicle. It takes less room. and does less damage to the highway. Of course there are reckless chauffeurs as there are reckless scorchers on bicycles and reckless drivers of horses. A good horse can go at a three minute clip along the highway. and the speed limit of automobiles ought to be at least that of the horse. We are at the beginning of the horseless age, and to hamper the new vehicle by unwise restrictions and unfair legislation would be to put a bar to human prograss and to try and stay the world's development. Punish the reckless scorcher whether he be a horseman, a bicyclist, or a chauffeur. But don't hamper the horseless vehicle because here and there some fool misuses it.—Paterson (N. J.) News.

An anonymous correspondent of the "Times" has sent in \$100 to bail out the "insignificant little loafer" (by Magistrate Brann's description) who on Sunday last was prominent in the attack on Mr. Edward R. Thomas's automobile. About the same time Jeromous Rapelyea, of Elmhurst, Long Island, arrested for hitting an automobilist with a lump of clay, was acquitted, on the ground that he acted in self-defence. Mr. Rapelyea's neighbors, it will be remembered, had promised to carry his defence, if necessary, to the highest courts. Magistrate Smith's decision comes to this, that any way of stopping an automobilist who threatens to run you down is legal. It is greatly to be feared, where "swatting" with a lump of clay is legal, that raking a motor car with duck shot would not be severely punished. Into the morality of this sympathy with riotous small boys and belligerent farmers we need go only so far as to say that the more inconsiderate drivers of automobiles have constituted themselves public enemies, against whom extraordinary reprisals may be employed. This, it need hardly be said, is a state of things favorable neither to automobiling nor to public order. The remedy lies with the automobilists.—New York Evening Post.



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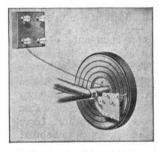
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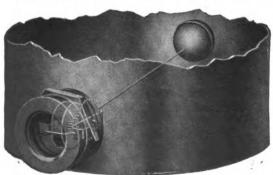
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The Week's Patents.

700,489. Vehicle Wheel. Daniel H. Haywood, New York, N. Y. Filed March 7, 1902. Serial No. 97,118. (No model.)

Claim—1. In a wheel, the combination with a hub member comprising a hub, spokes and a rim, the spokes provided at substantially their outer ends with laterally projecting ears forming bearing-faces, of a cushioning device, comprising a resilient ring, engaged by the outer face of said rim, a tire member comprising a tire rim, the inner periphery of which directly engages the said resilient ring, and guide plates secured to the said tire rim and projecting inwardly over the said resilient ring and hub rim, and engaging the laterally projecting ears or bearing-faces of said spokes; and a connection between one of the said spokes only and the said tire member.

700,497. Electric Battery. Conrad Hubert, New York, N. Y. Original application filed Aug. 9, 1900. Serial No. 26,397. Divided and this application filed April 1, 1901. Serial No. 53,929. (No model.)

Claim—1. As a new and improved article of manufacture the herein before described battery-cell having two elements, and having a centrally disposed contact-point and a surrounding annulus upon one end thereof, substantially flush with each other and connected respectively with the several elements, the contact-point and annulus forming terminals of the respective elements of the cell, substantially as described.

700,514. Vehicle Wheel. George S. Lee, Hawthorne, N. J., assignor to Wheel Within Wheel Co., New York, N. Y., a Corporation of New Jersey. Filed Nov. 1, 1901. Serial No. 80,770. (No model.)

Claim—1. A wheel comprising two relatively movable members, one a tire member and the other a hub member, and having a cushioning device between them, the hub member comprising two hub sections, a plurality of spokes, and a rim, the said spokes having portions thereof located between the said hub sections to form spacing-pieces therefor, and secured to the said hub sections.

700,515. Vehicle Wheel. George S. Lee, Hawthorne, N. J., assignor to Wheel Within Wheel Co., New York, N. Y., a Corporation of New Jersey. Filed Dec. 6, 1901. Serial No. 84,917. (No model.)

Claim—1. A wheel comprising two relatively movable members, one a tire member and the other a hub member, and having a cushioning device between them, the hub member comprising two hub sections, a plurality of spokes, and a rim, one of said hub sections provided with a central orifice adapted to receive a projection upon the other hub section, and the said other section provided with a central projection adapted to pass through said orifice; and a locking device between the first said hub section and the projection of the other said hub section. 700,516. Vehicle Wheel. George S. Lee,

700,516. Vehicle Wheel. George S. Lee, 700,686. Vehicle Wheel. Daniel H. Haywood, New York, N. Y., assignor to the Wheel Within Wheel Co., New York, N. Y., a Corporation of New Jersey. Filed March 1, 1902. Serial No. 96,205. (No model.)

Claim—1. In a wheel, the combination with a hub, spokes and a rim, of a channel tirerim having outwardly flaring flanges, a tire supported by said channel tire-rim, an annular cushioning device between the tire-rim and the first said rim, a floating plate, spokes arranged on either side of the said annular

cushioning device, and connecting the said floating plate and the tire-rim together, said spokes having portions which engage the sides of the outwardly flaring flanges of the tire-rim; and an intermediate guide plate between the floating plate and the hub.

700,666. Storage Battery. Levi W. Lombard, Boston, Mass., assignor to Fletcher W. Jewell, Boston, Mass. Filed March 1, 1901. Serial No. 49,447. (No model.)

Claim—1. In a storage battery plate, in combination, the series of strips of conducting material, slitted for the reception of the supporting rods, supporting rods, also of conducting material tapering lengthwise, fitting within the slits of the said strips, and making contact with the edges of the slits, substantially as described.

700,743. Motor Vehicle. Walter A. Crowdus, Chicago, Ill. Filed June 25, 1901. Serial No. 65,943. (No model.)

Claim.—1. In a motor vehicle, the combination of a vehicle frame comprising a transverse frame member, a reach which terminates short thereof and truss rods or struts which connect said reach with said transverse frame member, a motor pivoted to said transverse frame member at one side and connected to the reach of the frame at its opposite side, substantially as described.

700,768. Oiling Device for Motor Vehicles. William A. Hatcher and James W. Packard, Warren, Ohio; said Hatcher assignor to said Packard. Filed June 26, 1900. Serial No. 21,649. (No model.)

Claim.—1. In a motor vehicle provided with a hydrocarbon motor, the combination of a relief valve for the motor cylinder, a lubricating oil valve, a connection between said valves whereby the one must be closed when the other is open, and means for operating said valves.

700,772. Motor Vehicle. Bohn C. Hicks, Chicago, Ill. Filed Dec. 26, 1901. Serial No. 87,245. (No model.)

Claim.—1. In a vehicle of the class described, the combination of a main frame portion, a bell crank axle rockingly mounted in the rear end thereof, a central driving wheel on such axle, and two rear supporting wheels, rotatably mounted upon the bell cranks of such axle, substantially as described.

700,777. Carburetter. Edward R. Inman, Tipton, Ind. Filed April 19, 1899. Renewed Oct. 2, 1901. Serial No. 77.316. (No model.)

Claim.-1. In a carburetter for gas engines, an open, unobstructed carburetting chamber with downwardly converging walls, air ports leading to and from said carburet-ting chamber; a receiving and distributing trough located at or near the top of the converging walls of said carburetting chamber, means of introducing oil to and withdrawing same from said carburetting chamber, an exhaust chamber of larger diameter than, and receiving said carburetting chamber, an annular escape port at the top of said exhaust chamber, an annular channel formed about the top of said exhaust chamber, into which said escape port leads, a port in the outer wall of said channel, means of admit-ting the combusted, exhaust products of a gas engine to said exhaust chamber, means of generating preliminary heat in the exhaust chamber, about the walls of the generating chamber; all constructed, combined and operating substantially as shown and described.

700,779. Steering Apparatus for Vehicles. Alexander W. Kent, Boston, Mass. Filed Dec. 17, 1900. Serial No. 40,098. (No model.)

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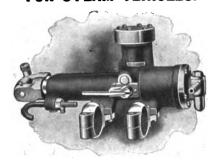
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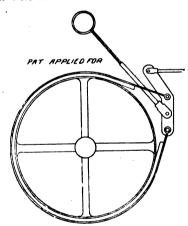
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700,785. Muffler for Explosive or Other Engines. Albert L. Kull, Camden, N. J. Filed March 22, 1901. Renewed Dec. 9, 1901. Serial No. 85,251. (No model.)

Claim.-1. A muffler, comprising a tube constituting the main body of the muffler, a frusto-conical tube connecting one end of said tube with the exhaust pipe and constituting an expanding chamber for the exhaust gases, a partition located at the outlet end of the expanding chamber and within the body of the muffler, said partition having a series of openings, each of which is substantially equal in cross-sectional area to the area of the exhaust pipe, and a series of tapered tubelike fingers extending within the body of the muffler from the openings in said partition, the area of the contracted outlets of the fingers being substantially equal to the area of the inlet of one of said fingers, and the inlet of one of said fingers being arranged in alignment with the exhaust pipe, substantially as and for the purposes described.

700,837. Solid Rubber Vehicle Tire. Frank A. Seiberling, Akron, Ohio. Filed Jan. 15. 1902. Serial No. 89,844. (No model.)

Claim.-1. An improved solid rubber vehicle tire having a rounded tread portion. with lateral flanges on each side of the base. and a downwardly curved base, and having embedded transverse wires or rods curved downward, in the centre from near the centre of the rubber tire on each side to the base, thence diagonally upward to the upper inner angles of the flanges and tire, substantially as shown and described.

701,000. Spray Pump for Explosive Engines. John T. Metcalfe, Quincy, Pa. Filed Aug. 7, 1901. Serial No. 71.188. (No model.)

Claim.—A spray pump for explosive engines, comprising a hollow passage leading to the explosion chamber, a pair of receptacles disposed adjacent to said passage and connected together by a neck, a piston fitting oil tight into one of said receptacles and provided with a valve stem, said valve stem projecting loosely through said neck into the other receptacle, a valve mounted upon said valve stem within said other receptacle, a tube connected with said receptacle containing said valve and with said passage leading to the explosion chamber, said tube being disposed obliquely upward to prevent entry of air bubbles into said receptacles, a lever for periodically depressing said piston, a cam for actuating said lever, a check valve for preventing retrogression of the hydrocarbon liquid from said receptacles, and an elevated tank for supplying said liquid under constant pressure to said receptacles.

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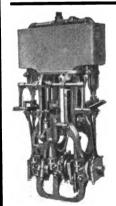
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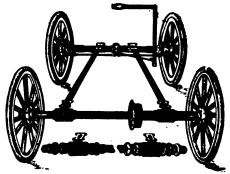
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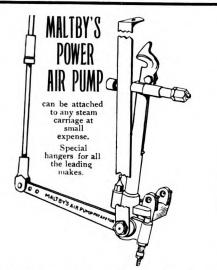
W. S. Rogers, Vice-President. (Late Manager The Ball Bearing Co., of Boston.)

BALL BEARINGS. ROLLER BEARINGS.

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ARE ACCORDED THE HIGHEST TESTIMONIALS. Send for free samples and pamphlet.

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Maltby's Power Air Pump for steam carriages is guaranteed to do no injury whatever to the engine.

MALTBY AUTOMOBILE & MFG. CO.,

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STEARNS CARS ARE WORTH MORE THAN THEY COST.

STEAM, GASOLENE AND ELECTRIC,

BOUGHT, SOLD, EXCHANGED, STORED AND REPAIRED.

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PRESSURE RESERVOIRS GASOLENE TANKS.



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CARRIAGE HARDWARE SPECIAL DROP FORGINGS **AUTOMOBILES**



are prepared to make estimates from drawings or models and guarantee first-class work.

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Delivered Immediately. Agents Wanted.



Winner of 47 Firsts out of 52 Races in 1901. Winner at Annual French Hill Climbing Trials at Gaillon Hill, November, 1901.

The "Darracq" 16 h. p. Cars were winners with the remarkable speed up an average 8 per cent. grade of 30 miles an hour, defeating all 40 h. p. Panhards and 50 h. p. Napiers.

AMERICAN DARRACO AUTOMOBILE CO... 652 HUDSON STREET, near W. 14th St. Station, 9th Ave., L R.R. NEW YORK CITY



Automobile

STEERING **DEVICES**

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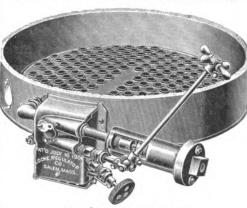
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A New Century Combination for Steam Motor Cars.



14, 16 and 18 inch sizes.

Gives operator absolute control of fire from the seat.

Not affected by wind. Regulator can be set at any pressure. Generator does not Smoke.

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A blend of French and Spanish Brandies, Medicinally Pure. Bottled and prepared expressly for family use and emergency cases.

This is a superior blend of brandy and offered direct to the consumer for the first time in its manufacture. Price is \$3.75 for four one-quart bottles, securely packed in plain cases, express prepaid by us.



Silk Hat Rye

\$3.20 sent to us will bring to you express prepaid by us, 4 full quart bottles of 7 year old Silk Hat Rye or Bourbon Whiskey. Guaranteed pure and up to the standard in every particular. If not as represented return it to us and we will refund your money.

Remember, \$3.20 for a gallon of whiskey which could not be bought for less than \$5. if you were to pay the middle-man's profit.

Direct to the consumer free.

GINSENG DISTILLING CO., St. Louis. Mo.

REFERENCE:

Mercantile Agencies, Any Bank in St. Louis.

The "Toledo" Steam Carriage

IS BACKED BY ITS OWN ACHIEVEMENTS

And Not by Manufacturers' Statements Only.

WHAT OTHER AUTOMOBILE COULD MAKE A TRIP OF

2000 miles, without accident, in the middle of winter.

NO OTHER MOTOR CARRIAGE HAS EVER ATTEMPTED SUCH A TRIP.

A Standard "Toledo," driven by its owner, a citizen of Hot Springs, Arkansas, averaged over ten miles an hour for the entire distance from Toledo, Ohio, to Hot Springs, Arkansas.

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INTERNATIONAL MOTOR CAR CO., Toledo, O.

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is to
Always
Take
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Blue

Ribbon.

The only automobile to win in the Long Island Endurance Test two years in succession.

We have never entered a contest that we have not won.

ANY OF OUR CARS WILL MAKE THE SAME RECORD.

WE MAKE SURREYS, PHAETONS, RUNABOUTS. PLENTY OF POWER. PRICES, \$1800, \$1500, \$1200.

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HAYNES-APPERSON CO., Kokomo, Ind., U.S. A.

THE MOST EFFICIENT OF ALL ELECTRIC VEHICLES

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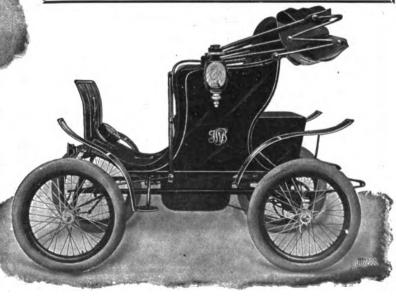
RUNABOUT.

THE LIGHTEST, STRONGEST AND MOST DURABLE OF ALL MOTOR VEHICLES. # # # #

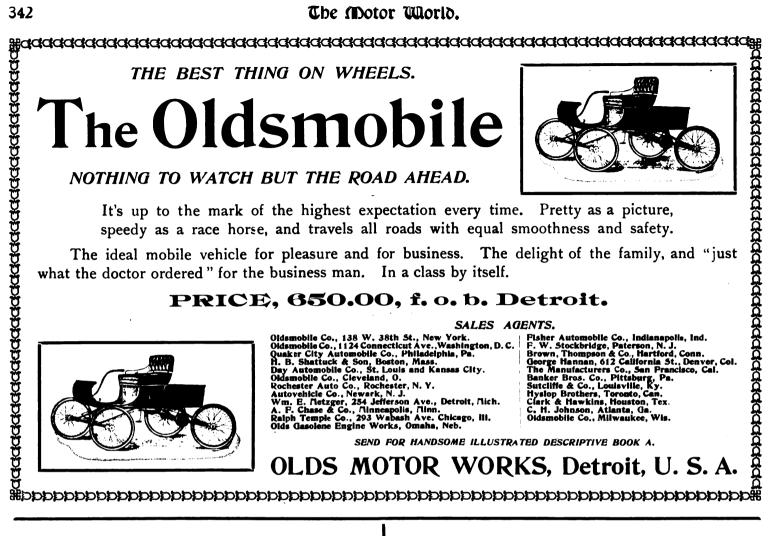
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Baker Motor Vehicle Company CLEVELAND, OHIO.

B A K E R BEAUTIES



STANHOPE.



TRY IT AND YOU WILL BUY IT.

The FRIEDMAN ROAD WAGON

point for point, is the equal of any gasolene Automobile sold in the United States for \$1200, and is the only machine equipped with a double cylinder balanced engine that retails for less than that amount.



They.will climb any grade up to 30 per cent. and develop any speed up to 30 miles per hour. Absolute and instantaneous control. Every engine guaranteed to develop 6 horse power.

Our price this year \$750.

Hung on platform springs front and rear.

FRIEDMAN AUTOMOBILE COMPANY,

3 East Van Buren Street.

CHICAGO. ILL.

AMERICAN TUBULAR STEEL WHEELS.



STRONG, NEAT, DURABLE

WILL NOT **8HRINK,.8WELL** OR WARP.

Our catalogue is fre for the asking and will give you some valuable facts.

AMERICAN WHEEL CO., PITTSBURG, PA.

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THE BUFFALO ELECTRIC CARRIAGE COMPANY

FROM USIN

Judge Hazel of the United States Circuit Court, Western District of New York, on June 5th, 1902, handed down a decision enjoining the Buffalo Electric Carriage Company from using the batteries manufactured by the PORTER BATTERY CO.

THE CASE WAS DEFENDED BY THE PORTER COMPANY THROUGH ITS COUNSEL, MESSRS. BANNING AND BANNING OF CHICAGO.

THE ELECTRIC STORAGE BATTERY CO. PHILADELPHIA.

DE DION BOUTON & CO.

PARIS, FRANCE,

Automobiles, Motors and all Accessories.

K. A. SKINNER, Sole United States Agent.

FACTS TO BE CONSIDERED.

I Mile Record established by a 60 H. P. Motor, time 51 4-5 seconds.
 I mile covered by an 8 H. P. DeDion Motor in 56 2-5 seconds.
 3 and 4 1-2 H. P. DeDion Motors are doing more reliable and better work on light runabout automobiles than any other motors of four

times their size and weight and an 8 H. P. DeDion Tonneau is doing better work than other makes claiming three times their power.

A DeDion Voiturette of 4 1-2 H. P. is the only machine that has ever made the run from Boston to New York in one day. In the 100 mile Endurance Contest of the Automobile Club of America which took place on May 30th one DeDion Motorette entered by Dr. Hoverstadt of Boston, an amateur, who a month previous had never run an automobile, took a blue ribbon and he had to hold his machine back so as not to get in a head of time. This is a record to be proud of.

> 40 DE DION MOTORETTES AND SURREYS WITH MOTORS OF 5 AND 6 H. P. FOR IMMEDIATE DELIVERY.

THE ONLY DEDION MOTORETTES ON THE MARKET, with the latest model DeDion 5 and 6 H. P. Motors. On account of the great demand for the new Model DeDion Bouton Tonneau in Europe, only a few can be secured for the United States. If you wish to secure one, SEND IN YOUR ORDER AT ONCE-Beware of IMITATIONS. DeDion Bouton Genuine Motors and Automobiles and their parts can only be secured through me or the parties I supply. SEE THAT THE COMPANY'S NAME IS STAMPED ON EVERY PART, if it is not, you are receiving an IMITATION. All sizes of DeDion Motors and parts kept in stock; DeDion Batteries, Spark Plugs, Tramplers Values etc. Sold in large or small quantities Tremblers, Valves, etc., etc. Sold in large or small quantities.

Address all communications to K. A. SKINNER.

De Dion Back Bay Automobile Storage and Repair Station, opp. Trinity Place Station and Clarendon St., BOSTON, MASS.





Hydrocarbon carriage. Automatic ignition governor; natural water circulation, no pump; minimum of lubrication points. Ideally suited for ladies' use.

\$750 F. O. B. Kenosha, Wis.

Write for free Catalogue M-W.

THOMAS B. JEFFERY & CO., Kenosha, Wisconsin.



AMERICAN CHAMPION

The following from the *The New York Mail and Express*, dealing with the May 31st speed trials on Staten Island tells the story of a pleasing victory:

"The Winton Touring Car upheld its reputation by easily beating the American record for the mile. There were three foreign machines in this class, which was for gasolene cars weighing between 1000 and 2000 pounds. yet the American evolved a winner by many seconds. The time was 1:17 3-5 for the mile."



Touring Car—Tonneau Detachable. PRICE, complete, \$2,000.

This was the standard Touring Car with a 15 h.p. motor. Do you also remember its blue ribbon and the hill-climbing championship honors in the Long Island Endurance Contest?

NEW CATALOG JUST PUBLISHED,

THE WINTON MOTOR CARRIAGE CO., - Cleveland, U. S. A.

NEW YORK CHICAGO BOSTON PHILADELPHIA

NATIONAL Electric Vehicles.

EIGHT MODELS.



BRAKE, 4 PASSENGER.

Our agency is a money maker.

NATIONAL VEHICLE CO.,

1400 East 22d Street,

INDIANAPOLIS, IND.



Reading Steamers

Are all they OUGHT to be and a little more; different from most steam carriages in that respect.

The performance of the car itself is the most convincing testimony of its worth.

WILL TELL YOU ALL ABOUT IT FOR THE ASKING.

Good Agents Only Wanted. PROMPT DELIVERY.

STEAM VEHICLE COMPANY OF AMERICA,
52 West 43d Street, New York.

SATISFACTION IN OWNING Grout Touring Wagon

comes from those conditions which only experience can give. We have the experience—were the first in this country to build an automobile factory—we give you the results because we take take care of every detail.



CLAIMS MEAN NOTHING IF NOT PROVED.

Write us for proofs; we will furnish them.

GROUT BROTHERS, Orange, Mass.

NEW MODEL 6

\$1500 Auto for \$800.

DOUBLE CYLINDER MOTOR.

PERFECT ACTION

EASY TO CONTROL AT ANY SPEED.

THREE POSITIVE SPEEDS FORWARD AND REVERSE.

A Blue Ribbon, 100 Per Cent., Proposition to Agents. ELMORE MANUFACTURING CO., Clyde, O., U.S.A.

BILLINGS & SPENCER CO., Hartford, Conn., U. S. A.

We have added to our stock auto parts a

Machined Steering Equipment.



(Cut one-sixth size.)

ORDERS PROMPTLY FILLED.

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Does away with worry about how long your batteries will last, the jerking caused by missing explosions, and you can make more miles with the same consumption of fuel. If you



are buying a new machine specify this igniter.

Let us send you printed matter.

The Dayton Electrical Mfg. Co.

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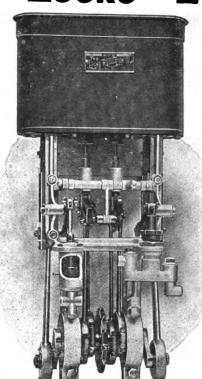
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STRONGEST. NEATEST. CHEAPEST **ENGINES** ON THE MARKET.

Built with piain or ball bearings in 456 H. P. and 10 H. P. sizes.

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SALEM, MASS., U.S.A.

We Have Been Making Bells Since 1832



We think this pretty strong assurance that we know how to make well and sell them rightly. In the matter of automobile bells we believe the

to be distinctly better than anything else of the sort on the market, It will afford us pleasure to foward you details and price on

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THE REASON AUTOMATIC AIR PU

wherever desired automatically, without care or attention.

We also make the REASON JR. AIR PUMP "Non-Automatic," which is controlled from the seat of the wagon.

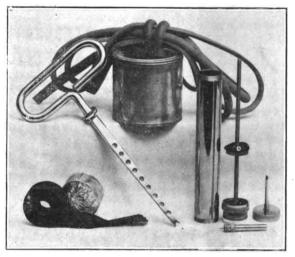
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EASTERN AGENTS:

CHAS. E. MILLER, 97 Reade St., New York. SPALDING-BIDWELL, 29 W. 42d St., New York. POST & LESTER, Hartford, Conn.

DIAMOND REPAIR OUTFIT

= SOUND ADVICE =

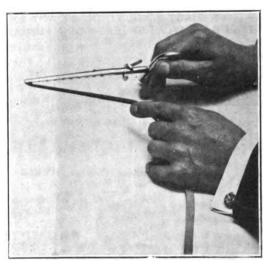


The Repair Outfit Complete

In Price—
it's low

In Simplicity—
it's a marvel

In Results—
it's positive



Attaching Rubber to Inserting Tool

WHAT has there been wanting during the past three years to make single tube Automobile Tires more satisfactory? We will tell you. A repair outlit which would successfully close a puncture in a few minutes and make a permanent repair. The owners of machines object to removing tires and sending them away to be vulcanized for the reason that they lose the use of the machine, and it is an expensive method of repairing.

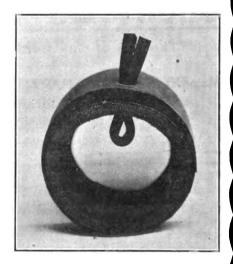


Inserting Rubber in Puncture

WE have a device that anyone can use successfully and it should surely stimulate the use of single tube Automobile Tires. We shall be glad to furnish a complete outfit for \$2.00 and ship it to you on trial to be returned if unsatisfactory.

THE DIAMOND RUBBER CO.

AKRON, OHIO



Trim Rubber on Outside and Job is Finished

BRANCHES:

NEW YORK, 1717 Broadway NEW YORK, 15 Warren Street BOSTON, 234 Congress Street BUFFALO, 41 Court Street PHILADELPHIA, 435 North Broad Street CHICAGO, 429-431 Wabash Avenue SAN FRANCISCO, 8 Beale Street DENVER, 1562 Broadway

DETROIT, 310 Woodward Avenue

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, June 12, 1902.

No. 11

CONTEST OVER CONTROL

A. A. A. Refuses Sanction to N. A. R. A., but Latter Will Run Race Meet.

The first trial of strength between the American Automobile Association and race promoting bodies which do not recognize its control of racing comes early. War has been declared between the A. A. A. and the National Automobile Racing Association, and each side appears to be determined to carry it to the extreme limits possible.

The application for a sanction to run its meet at Brighton Beach, Coney Island, on June 21 having been rejected by the A. A. A. the N. A. R. A. announced that it would run it willy nilly. It further said that it was assured of support from racing automobilists. To this defiance to A. A. A. responds by delivering this broadside, which takes the form of a notice sent out by its secretary:

"Please take notice that the American Automobile Association have denied a license to the promoters of the proposed race meeting to be held at the Brighton Beach track on June 21, although said promoters have publicly announced that the meeting would be held under the American Automobile Association racing rules.

"Your attention is called to Rule XVII of the racing rules, as follows:

"'Rule XVII—If any one races at any unorganized (unlicensed) meeting he is disqualified for all races to which these rules apply"—

which applies alike to non-members as well as to members of clubs belonging to the American Automobile Association, and means that if you race your automobile or allow it to be raced at an unlicensed meeting you are disqualified for licensed meetings held under the American Automobile Association racing rules.

"Your attention is further called to the fact that the promoters above referred to have advertised under the name of 'The National Automobile Racing Association,' which is the name of the organization formed more than a year ago by W. K. Vanderbilt, jr., and his associates at Newport, under the auspices of which association a

licensed race meeting was held at Newport in August, 1901. It should be clearly distinguished that the present promoters have no connection whatever with the original 'National Automobile Racing Association.'"

No very definite information is obtainable regarding the N. A. R. A. The names given in connection with it are all unknown, and it seems to be an open question whether it has any real backing.

Receiver for a Dayton Concern.

Frank W. Howell has been appointed receiver of the Dayton Motor Vehicle Co., of Dayton, O. This action was the result of a suit brought by Irvin C. Souders, G. N. Bierce and W. T. Teter against F. P. Beaver, W. H. Lonsdale and C. C. Jackson, of the Dayton Co., to recover on three notes aggregating \$6,000, on which the plaintiffs were sureties. The liabilities are placed at \$15,000, with nominal assets of \$10,000.

Will not Sell Out.

There is no truth whatever in the report that the automobile business of Stanley Bros., Newton, Mass., is to be sold.

The rumor probably arose from the fact that Stanley Bros. are considering a proposition for the sale of their dry plate business, and if the deal goes through it will include the ground and building now occupied by this automobile plant.

The automobile business is not for sale, however, and if the deal goes through Stanley Bros. will locate in a new plant.

Completed Racing Committee.

By the appointment this week of two additional members, the makeup of the National Racing Committee of the American Automobile Association has been completed. President Scarritt announced that Messrs. A. R. Pardington, of the Long Island Automobile Club, and H. B. Brazier, of the Automobile Club of Philadelphia, had been named, and with Chairman W. J. Stewart would constitute the committee.

Blaze at Providence.

Fire of unknown origin injured eleven automobiles and caused damage approximating \$10,000 at the Providence, R. I., store of the International Motor Car Co., on Tuesday.

PARIS-VIENNA IS ON

That and Bennett Cup Races Will be Run--Government Sanctions Them.

All doubt regarding the Paris-Vienna and the Bennett Cup races is at last set at rest. These classic French road races will be run, in all probability in conjunction. The date set for the start of the former is June 26.

In inducing the French Minister of the Interior to officially sanction these events the Automobile Club of France has won a great diplomatic triumph. The complete success of the Northern Circuit races paved the way for the removal of the interdiction on the events under notice, and by striking while the iron was hot, after many weeks of patient waiting, the French governing body secured its point.

The action of the French minister has effect only as far as the frontier, of course.

But the Austrian Government has already given consent to race through its territory, and it only remains to secure permission to bridge the chasm which intervenes. If the German officials are found in a complainent mood and their sanction can be obtained, the route will be through Bavaria.

If the opposition of the Bavarians cannot be overcome, however, Switzerland will be chosen instead, and the contestants will drive through that country as tourists, resuming the race upon reaching Austrian soil.

Cases Postponed and Bail Reduced.

On last Friday and again on Monday of this week the cases of W. C. Baker and C. E. Denzler, arraigned in the Second Magistrate's Court, at Staten Island, and charged with homicide, were postponed the second time until June 13. The District Attorney was not ready to go ahead with the hearing. On application of the prisoners' counsel Magistrate Marsh reduced the amount of bail in each case. That of Baker was made \$2,000 in place of \$10,000, and of Denzler from \$5,000 to \$1,000.

Automobile racing will be one of the attractions of the State Fair, to be held at Syracuse, N. Y., beginning September &.



PERMISSION FOR TWO

French Government Allows Paris-Vienna and Bennett Cup Races to be Run.

Paris, May 30.-Events in automobilism are once more proving the truth of the old adage that everything comes to those who wait, if only you know how to wait and can help chance to fall in your way by exercising a little tact and making the most of any opportunities that may be offered. Two months ago people scarcely dared to talk of Paris-Vienna, and with solemn resignation declared that the sport of autmobilism was dead, but the tactful ones saw that there was at least a chance if only they could meet it halfway, and they have done so by working upon the sympathy of the government and earning something like gratitude for what they did in contributing to the success of the Northern Alcohol Circuit.

The alcohol race was a very bold experiment on the part of the Minister of Agriculture, who perhaps found the responsibility heavier than he had expected on the eve of the event, for a single fatal accident would have let loose all the pent up fury of the opposition against the government. The race must therefore be got through successfully at all costs. Despite the extraordinary precautions taken there was no telling what would happen, and the nervousness of the Minister was observable in a statement he made to the president of the Automobile Club that if the Alcohol Circuit went off without accident the government might be disposed to sanction the Paris-Vienna race. The club, the makers, and the competitors themselves saw the necessity of exercising the greatest precaution if they would take advantage of this turning point in the fortunes of the sport, and the race was an unqualified success, devoid of any accident of a serious character.

LOCAL SANCTIONS SECURED.

Immediately on the conclusion of the Alcohol Circuit the representatives of the club called on the Minister of the Interior with a formal application, and they were asked to present a plan of the course through France, and during the last week the club has been communicating with the mayors and prefects, every one of whom have given their sanction. The course selected starts from Champigny, a few miles to the east of Paris, and reaches the French frontier at Belfort. Yesterday the Prime Minister gave his formal approval of the race, and thus the most difficult part of the negotiations are terminated. The representatives of the Austrian Club are now conferring with the A. C. F. as to the course to be taken from Belfort to Vienna. Now that the French Government has approved of the race it is expected that no opposition will be made by

the German Government, in which event the race will proceed through Bavaria. This, however, is by no means certain, and in the event of the race not being authorized in Germany the vehicles will pass through Switzerland, though as high speeds are out of the question in that mountainous country, the competitors would go from Belfort to the Austrian frontier as tourists, and the race would then be resumed to Vienna. At the moment there is every probability of the race being continued through Bavaria, and it will be run off in three stages. It is to start on June 26.

IMPORTANT NEW CLAUSE.

The experience of the Nice-Abbazia race, or rather its suppression, has shown the Automobile Club the necessity of modifying the racing rules so as to prevent any possible recurrence of the reckless driving which compelled the Italian Government at the last moment to prohibit the event. A new clause has been added, to the effect that intending competitors are not allowed to make speed trials over the course, and if they are found guilty of doing so they will be disqualified. If they desire to prospect the course they must keep well within the legal limit of speed. Another new rule, and a very necessary one, is that vehicles carrying exchange parts, spare tires and the like, will not be allowed on the course while the race is in progress. Nearly all the makers have been in the habit of patrolling the course with such vehicles, which naturally increase the danger of accident and collision, and in view of the number of racing machines on the road it has been found necessary to suppress these hospital vehicles altogether. The competitors will thus be left entirely to their own resources, and with the system of "closed parcs" in operation, by which no repairs are allowed to be carried out between the different stages, there will be none of that overhauling we have seen in previous races, when at the end of each day's run the racing automobile was practically converted into a new one by changing everything which might possibly show signs of the slightest wear.

The Paris-Vienna event will be by far the biggest race yet held. No fewer than 139 vehicles have already been entered, and not only are all the French makers strongly represented, but there will be quite a number of German and Austrian vehicles,

THE BENNETT CUP CHALLENGER

The Gordon Bennett Cup competition is to be run off at the same time as Paris-Vienna, probably between Paris and Belfort. France will no doubt be represented by a Panhard, a Mors and a Charron, Girardot et Voigt vehicle, while the challenger is the Wolseley Tool and Motor Car Company, of Birmingham, England, and as this firm have just completed their racing vehicle there is no doubt that it will take part in the match. The new Wolseley has a 30 horsepower motor, which is less than half the power of

some of the French vehicles, and it certainly does not seem to have the slightest chance of beating them in point of speed, but the English makers appear to think that their hope of success lies in the regularity and reliability of their automobile, which will be racing steadily all the way while their competitors may be tinkering at repairs. This claim may very well have had some ground for justification in years past, but nowadays the French vehicles are so carefully constructed that there is not much margin for beating them on the score of reliability.

The racing automobiles being constructed for Paris-Vienna show many interesting new developments which are the outcome of the new rule limiting the weight of vehicles to 2,200 pounds. As they have to get the greatest possible power within this weight limit, makers have been obliged to entirely modify their motors and under frames, and some of them have arrived at really extraordinary results. Panhard et Levassor and Charron. Girardot et Voight have abandoned the old method of casting the cylinders of their motors for the racing vehicles, and they are now bored out of steel, the metal being first of all subjected to hammering or hydraulic pressure to secure the greatest possible toughness and homogeneity, and they can thus make their engines with much thinner cylinder walls. By this system, of course, each cylinder is separate, and they are joined by cross pieces to resist torsional strains due to the enormous effort put on the frame when racing. The crank shaft runs in bearings between each pair of cylinders. In the Centaur engine the cylinder has a corrugated jacket of thin sheet copper coming down over the combustion chamber, while in the C. G. F. motor a smooth copper jacket entirely encases the cylinder. The engine is thus very light, the new 75 horsepower Centaur of Panhard et Levassor weighing no more than 677 pounds, or 9.6 pounds per brake horsepower.

TRYING OUT ON THE QUIET.

Neither the Panhards, the C. G. V., the Mors nor the other new racing vehicles have yet had an opportunity of being put to the test, and, in fact, they cannot be driven at full speed except on a quiet stretch of road away from the argus eye of the police, and the makers are not of course disposed to give themselves away by publishing the results of these tests. That they are marvellously fast there can be no doubt, and it will need the Paris-Vienna race to show whether this considerable reduction of weight and increase of power can be accomplished without sacrificing the durability of the vehicle. It is in this direction that automobile races are so interesting and instructive. The makers have struck out in an entirely new line, which, if it prove successful, cannot fail to have excellent results in reducing the weight and augmenting the efficiency of touring vehicles. The only thing to be considered is whether this can be done without adding to



WEIGHT REDUCING

Famous Panhard Firm's Ceutaur Motor Made Much Lighter- Its Details.

Of the great French firms there is none whose product is regarded with more interest than is that of Panhard-Levassor. They are about to introduce some important modifications in their Centaur type of motor, with the object of considerably reducing weight.

They have, in fact, patented certain arrangements by which each cylinder is isolated, the outer wall of the water jacket around the cylinder being in very thin metal, the water jacketing of the cylinder head specially arranged, the adoption of triple induction valve in one seating, and the fitting of a crankshaft bearing between each crank.

Fig. 1 is a side elevation of a four-cylinder motor, with crank chamber in longitudinal vertical section. Fig. 2 is a plan, and fig. 3 a transverse vertical section through the centre of one of the cylinders.

As can be seen, the motor shown is a fourcylindered engine with each cylinder standing alone, and bolted to the upper face of the crank chamber by the flanges C C. The upper end of the cylinder is domed and flanged to take the cylinder head D. in which are placed the induction and exhaust valves E of and whatever systems of ignition are adopted. The upper portions of the cylinders are surrounded by the thin elastic metallic casings G G. These casings are to be soldered to the cylinders.

The induction of the intercrank bearings to the crankshaft J permits that shaft to be considerably lightened. The cylinder head takes the form of an elbow tube cast with water jacket. The joint between the cylinder and cylinder head is a scraped joint, and made in each case by four studs and nuts. The exhaust valve F is single only, but the induction valves E are triple, and are placed immediately over the exhaust valve. These nests of valves E are set in seatings formed in the disc M, which is screwed into the cylinder head as shown.

The gas-tight joint is made by the beaded rim of the dome-shaped valve chamber cover Q, which bears upon a compressible washer held in a suitable groove formed in the cylinder head. The cover Q is secured in position by the set screw P. The exhaust valve F is actuated by a cam S on the halftime shaft T through the exhaust rising rod U. The cylinder head D is relieved of the thrust of the rod U, when actuated by the cam S, by means of the tension rod V. The cylinder heads are connected to each other by means of the lugs X X cast thereon, and the keys Y. This is done in order to disperse the diagonal thrust of any connecting rod under drive upon all four cylinders.

FIGS. 1 AND 2.

A A, cylinders.

B B, crank chamber. C C, cylinder flanges.

D D, cylinder heads.

E E E, induction valves.

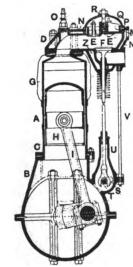


FIGURE 3.

F. exhaust valve.

GG, metallic water jacket.

H H, pistons.

I I, connecting rods.

J.J. crankshaft.

M, disc carrying induction valves.

O, sparking plug.

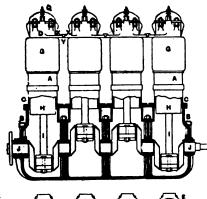
Q Q, domed valve chamber covers. X X, lugs connecting cylinder heads.

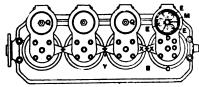
Y, steel keys joining lugs X X.

FIG. 3.

A. cylinder.

B, crank chamber. C, cylinder flange.





FIGURES (AND 2

D, cylinder head.

E E, induction valves.

F, exhaust valve. (i, metallic water jacket.

H, piston.

I. connecting rod.

M, disc carrying induction valves.

N N, water jacket of valves and combustion chamber.

O, sparking plug.

Q, dome-shaped valve cover.

S. exhaust cam.

T. half-time shaft.

U. exhaust valve lifting rod.

tension rod to take strain off cylinder

NO ACCESSORIES

Should go With the Motor Vehicle Says Detroit Dealer-His Reasons.

When W. E. Metzger, Detroit's wideawake dealer, was in New York last week, he gave expression to an opinion which has more than once been remarked in the retail trade.

"One of the things I cannot understand, or at any rate cannot fully appreciate is," he said, "the practice of automoble manufacturers in equipping their vehicles with lamps, bells, horns, odometers and all the other accessories that are not included in their productions.

"To my way of thinking, the sale of those articles properly belongs to the retail trade. We dealers are not in business for our health, and with us everything counts, the profit on a sundry no less than the profit on a vehicle, As it merely adds to their costs, why manufacturers should include in their equipment \$40, \$50 or \$100 worth of sundries is beyond me. We dealers are supposed to carry these things in stock, and it would seem the business of the automobile manufacturer to help us sell them, and not place obstacles in our way. If dealers received vehicles barren of such equipment, it would afford us more room for telling argument in making a sale. If we so desired, we might throw in a lamp, a bell or a horn, and thus please the prospective purchaser and melp clinch the sale.

"But whether or no, the sale of these articles would seem to be our business, and not the business of the vehicle manufacturer. The one who first gives the matter thought and acts accordingly will, I believe, earn the good will of dealers in substantial volume."

Coney Island Up-to-Date.

It was at Coney Island.

It came on in impressive fashion-a big, stylish, canary-colored tonneau. A becapped chauffeur was at the wheel. A becapped flunky was perched on the rumble behind.

The passengers were well dressed and apparently not beyond the station in life that such an expensive conveyance usually suggests.

Such conveyances are not usual at Coney, so redolent of frankfurters and stale beer.

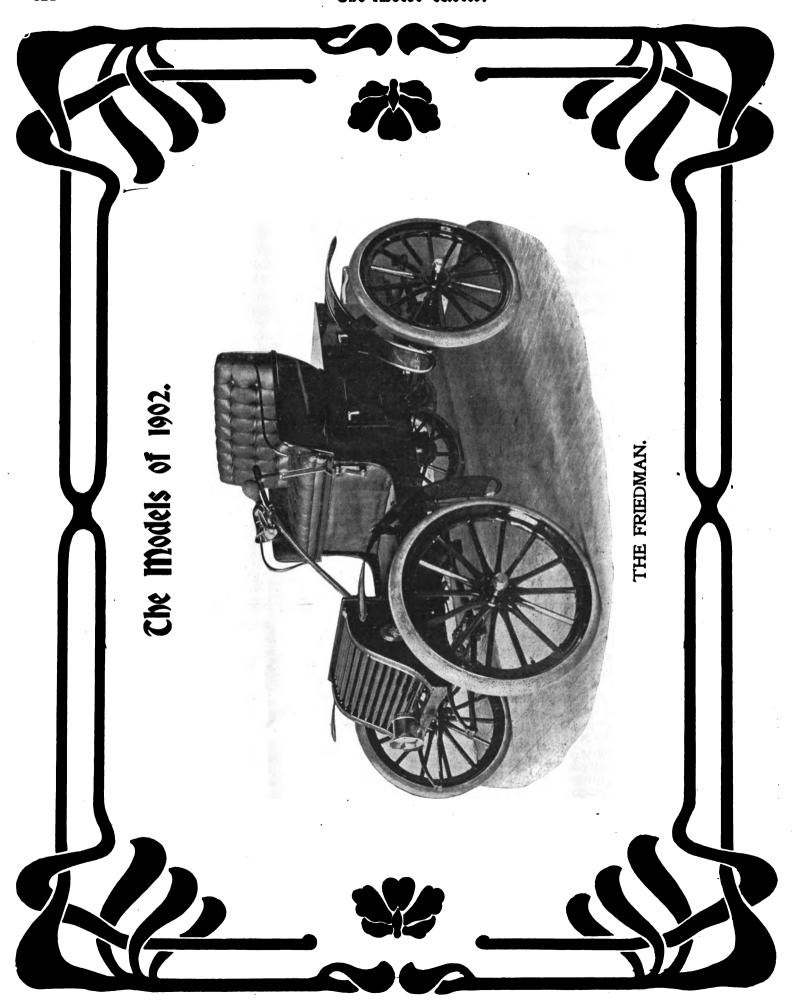
The sight, perforce, caused a stretching of necks. Before they relaxed the car snorted

As eyes turned in the new direction they met this sign on the rear of the rumble: "Round trip, 10 cents."

Coney Island is up to date.

A run of more than usual interest was that made last week by an Oldsmobile owned by the James Bailey Co., of Portland, Me. The distance from Boston to Portland, 125 miles, over poor roads, was made at an average speed of 15% miles an hour, no trouble of any sort being experienced.







Published Every Thursday
By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING. 154 Namau Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Lendon Office, 53 Fleet Street, Paris Office, 2 Rue d'Abbeville,					
Subscription, Per Annum [Postage	Pa	id]			\$2.00
Single Copies [Postage Paid] .				10	Cents

Invariably in Advance.

Foreign Subscription

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE GOODMAN COMPANY.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the tacilities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N.Y. Poet Office, November, 1900.

NEW YORK, JUNE 12, 1902.

Unexampled Economy of Operation.

Additional testimony, if such were needed, to the remarkable economy of the motor vehicle has been borne by the consumption test held in conjunction with the recent non-stop run of the Automobile Club of America.

This testimony makes it very plain that on the score of economy the automobile is a long way ahead of any other vehicle. Not even the trolley car can touch it.

The leading vehicle in this run fell a little short of the record made in the Long Island contest, its consumption of gasolene being four gallons as against three and a quarter gallons in the earlier event. It is worthy of mention, however, that one of the non-winners, which made two stops, exceeded all others in point of economy, its consumption being exactly three gallons.

The much greater number of hills on the Bridgeport course made a slightly increased consumption almost a foregone conclusion.

Hills eat power, and it takes gasolene to make power. That in spite of the abundance, the steepness and the length of these "pimples," the increased consumption of gasolene should be so slight is surprising as well as gratifying. It indicates good handling of the cars, as well as an evenness of performance on the part of the latter, weight and horse power being considered.

The figures are notable also as being the first exhaustive compilation ever made in this country.

All of the finishing cars took part in the consumption test. The club's official measurers took charge of them at the finish, filled the empty or partly empty tanks, and by comparing notes with the observers were able to make calculations that must be regarded as entirely accurate.

With or Without Accessories?

Whether or no the automobile manufacturer is doing wisely in equipping his vehicles with lamps, bells, horns, odomterers and the like is a pretty question.

From the standpoint of the individual purchaser, the wisdom is undoubted. From the viewpoint of the dealers, as is made plain

by the expressions of W. E. Metzger in another column, the matter assumes a different aspect, and Mr. Metzger's very prominence in the retail trade should carry with it respect for his opinions.

He states the case so logically and well that his remarks deserve and cannot escape consideration.

His contention that the sale of accessories is clearly the business of the dealer and not that of the vehicle manufacturer admits of small dispute. The same is true of his statement that the occasional gift of a lamp or horn will decide a sale. Taken together, they form a front that appears sufficiently strong to sway the vehicle manufacturer who is courting the support and good will of his agents and leads directly to the question: Would it not be a good stroke and wise policy if makers listed their cars at two prices—with and without accessories?

To us the affirmative of the question appeals strongly; it seems an easy and attractive solution that will leave little if any room for argument or differences of opinion.

We present the suggestion as worthy of serious consideration.

The Little Things.

What little things it takes sometimes to defeat cherished aspirations, to upset well planned campaigns! The mishaps that were least expected are nearly always the ones to blame. It is possible to guard against the expected.

We can imagine the feelings of the gentleman in the Non-Stop run who stopped three times to clean a dirty sparking plug—the only blemishes on an otherwise spotless record. Or that other one whose chain "came off" twice and prevented his receiving a certificate. Or a third who cut off his supply of gas and brought his car to a stop. The chagrin of these three must have been too deep for words.

Other minor and preventable causes of trouble arose. None of them were of a serious nature, the lengths of the stops being short. Several of them were due to temporary stoppages on Putnam Hill. Loose clutches figured among the troubles to a greater extent than was to have been expected. Hot bearings also were entirely too much in evidence, indicating carelessness or constructional defects. On the other hand, the carburetters appear to have worked extremely well. There is scarcely a reference to trouble from such a source.

The ignition on the gasolene cars gave much more trouble than the carburetters. Dirty sparking plugs were the most numerous, a fact which argues something wrong with the operator, although this is not an infallible rule. Nor should it be forgotten that a foul sparking plug is not really a sparking trouble at all. Several broken connections on sparking plugs were reported, while coils developed defects, and a short circuit is mentioned.

On the whole, however, the stoppages were due to the class of preventable, and therefore doubly annoying, causes—a fact that strengthens the belief that the best cared for and best handled cars are nearly always the ones to come through such contests with a clear record.

Keep the Mufflers On.

There will probably always be automobilists who delight in making a noise or in other ways transgressing the unwritten laws which apply to their class. Just now, when the need of circumspection is greatest, they are most apt to offend.

In this connection the growing practice of detaching mufflers should receive some attention.

The French motovehiclist takes a keen delight in noise—so we are told on excellent authority. He likes mufflers that muffle but little, and the more noise he leaves in his wake as he speeds along the better he is pleased. Upon coming over here he is sur-



The Motor Worth.

prised and grieved to see what a difference there is in the practices of the two countries. We regard the noise as an enemy, to be gotten rid of if possible without impairing the efficiency of the engine too much.

It is perhaps because of this French fondness for the noise from the exhaust that an increasing number of our users make it a practice to follow their example.

It is a tendency that should be frowned on, however, because it lends strength to one of the stock arguments against automobiles. The noise cannot be stopped; the best we can hope for is to stop part of it, to muffle it, in fact, and if we do not do what is quite within our power we shall lay ourselves open to just criticism.

It is understandable that a racing car should have the exhaust muffled as little as possible. Speed is its greatest object, and when it is run on a special road or track no very great objection can be made if the exhaust is a little more in evidence than usual,

But in the city streets and on the country roads it is a very different matter.

There other road users are to be considered, and it is only reasonable that they should demand of the motor vehicle that it shall be as inoffensive in this and other respects as the exigencies of the case will permit.

The Good They Be.

Two at least of the classic French road races now appear to be reasonably certain of being run. These are the Paris-Vienna and the Bennett Cup, permission for which has just been granted.

There have been so many slips "touchin' on and appertainin'" to this matter that no one can feel quite at ease until the coveted permission is signed, sealed and delivered, and even then some grumpy minister, whose chickens happen to be decapitated by an inconsiderate automobilist may step in at the last moment and interpose an unwelcome but peremptory veto.

As yet nothing is said about the almost equally famous Paris-Bordeaux race. It is, perhaps, best not to ask for too much at one time, not even while the pleasant taste of the Northern Circuit race is still in the mouth. A little later, when road racing will seem to be the natural thing for the home of the great historic races, a further request will probably receive favorable consideration.

Aside from every other consideration, it is induibitable that such contests make for the betterment of design and construction. The cars that are speedy, strong and reliable, as the winners of such strenuous contests must be, yield valuable lessons for those who study them, and their influence is felt in some degree even in the cars that have speed for the least considered object, and whose owners would look upon speeding as but little short of the unpardonable sin.

Warning or No Warning.

In characteristic Chicago fashion, the authorities of that city have taken action that, in the jargon of the day, puts it "up" to the people to find out whether they would rather take their chances with a machine which can warn them of its approach or trust themselves to an operator who knows that he has to run slowly because he cannot sound an plant.

A practical sort of a referendum, as it is called, is to be tried on automobiles. In the parks and on the boulevards the machines are to run without using bells to warn pedestrians. On the city streets they are to use four-inch "gongs."

If there are more "kicks" received on automobiles in the parks and boulevards than there are on the streets the park boards will change their rules and demand bells. If there is more complaint caused by the operation of machines in the streets the city will change its ordinance forbidding the use of an alarm.

Otherwise the rules governing machines on the boulevards, in the parks and on the streets are to be identical.

The Knowing How.

To the experienced motorist it seems astounding what a small stock of knowledge serves to keep the majority of automobilists on the road.

Many men enjoy the pastime splendidly, but consider it too great a nuisance to make themselves ramiliar with the working of their cars. The best thing that could happen to these individuals is an accident, for a novice can pick up more practical knowledge inside half an hour when a minor mishap occurs than he would reap out of a whole week's uneventful driving.

This year there will be more novices on the road than ever before, and they cannot be too often warned against following the example of the manufacturer who once (it is releated), when questioned about an engine which was running at his works, replied, "Yes; this engine works splendidly. You see it has three holes. The steam goes in through one, comes out at another, and the

oil goes in through the third. That is all I know about it, and all I want to know."

If those who contemplate "joining the ranks" will only spend a few hours in making themselves acquainted with the principles involved in the motor and its appurtenances, they will find there is little reason for the lately expressed opinion that it is a risky thing to go far on a motor car, owing to the fact that it is liable at any moment to leave you stranded twenty miles from "anywhere."

Look in any book written for veterinary surgeons, and you will find that horsefiesh is heir to hundreds of accidents and diseases. Yet how often does a horse leave any one stranded on the road? Rarely. If this is so where horsefiesh is concerned, how much less risky it is to travel on a mechanically propelled carriage. This for the benefit of the waverers.

"One brake and that good and properly looked after" is the way one automobilist sums it up. Perhaps there is something to be said for the contention in his case, for he always sees that his brake is right. But even there an emergency brake, one to be drawn on only when the unexpected happens, could do no harm, and it might do a great deal of good. Danger is to be apprehended when something happens to the "good brake." In such case even unusual skill fails sometimes, and good luck, not good management, alone can avert serious consequences.

That sauce for the goose is also sauce for the gander is evidently the belief of that New Haven automobilist who seeks damages for the wrecking of his vehicle through its plunging into an embankment in one of the streets of the Elm City. Heretofore the motor vehicle user has been considered fair game by all and sundry. He is chased from pillar to post in a merciless manner, his privileges curtailed, his rights contested, and it is a refreshing novelty to have him turn and take a hand in the game.

Nice thing it will be to own an automobile if all the plans of the kind friends (?) of that vehicle are put through. Registry with the Secretary of State and the carrying of initials, as is required in New York, is not enough. A licensing scheme is strongly urged, inspections are talked of. The license number must be carried on the vehicle—perhaps the certificate of inspection also, if that scheme should ever come to anything.



WITH OFFICIAL STAMP

Committee of A. C. A. Gives Forth Exhaustive Figures of Non-Stop Run on Decoration Day —Consumption Test Peculiarities.

Perhaps by way of amends for their unconscionable delay in compiling them, the figures given out late last week by the Non-Stop Run Committee of the Automobile Club of America are remarkably complete. They tell the story of the 100-mile run on Decoration Day as it could be told in no other way.

The work of the twenty-eight certificate winners and of the sixteen other cars which finished but at the cost of one or more stops, is graphically depicted. The quantity of gasolene and—if the car be a steamer—of water consumed by these forty-four vehicles,

as determined by official measurement, is given in detail, and some surprising differences are made plain by the figures. The sixteen finishing but non-winning cars are treated similarly, and in addition a complete description of their stops, with one exception, is given. The causes, many of them of a trifling nature, which threw them out of the competition, are noted, and show how close to success some of them were.

Of the fifty-five starters but eleven failed to go over the entire course. The conditions of the contest were such that a single penalized stop destroyed the chances of any vehicle. When a mishap of this kind occurred there was nothing left to strive for, and many of the operators did not consider it necessary to continue their journey. Of the missing eleven several could have done so without any trouble.

NON-STOP CERTIFICATE WINNERS. GASOLENE.

As has been stated, the consumption figures reveal some surprises. The Whites again score impressively, both in gasolene and water consumption. In the former they get close to the figures of the explosive engine cars, while their water consumption is a trivial item. The Pierce motorette carried off the honors by using the least quantity of gasolene, four gallons, close pushed by a Darracq with 4½ gallons. One of the Overman cars also did remarkably well, its consumption of gasolene being only 10½ gallons.

It is worthy of mention that in the list of certificate winners are found three firms with three cars each, viz., the White, the Knox, the Fournier-Searchmont and the Locomobile. There were also two Prescotts, two Darracqs and two Georges-Richards in the same list.

The complete figures follow:

				No. of		Consum	otion of
				Passer		Gasolene.	Water.
No. Maker.	Entered by.	H.P.	Weight.	gers.		Gals.	Gals.
A 12. Geo. N. Pierce Co			1130	2	G. & J		
A 23U. S. Long Distance	. A. J. Lamme	7	1660	2	Goodyear	41/4	
A 27A. Darracq & Cle	Charles D. Cooke	9	1560	2	Michelin	5	
A 28A. Darracq & Cie	F. A. La Roche	9	1750	2	Michelin		
A 32. Ohio Automobile Co	H. W. Whipple	12	302 0	4	Diamond		
A 33 Mors, Paris	Jefferson Seligman	12	2900	5	Michelin	7	
A 38. Georges-Richards	C. J. Field	10-12	2000	4	Michelin	8	
A 39. Georges-Richards	Alex. Fischer	10-12	2000	4	Michelin	7	
A 43. Autocar Co	William Morgan	$8\frac{1}{2}$	1500	2	Dunlop	5	
A 50De Dion-Bouton Co	J. F. Hovestadt	$4\frac{1}{2}$	1225	2	Dunlop	6	
A 52 Fournier-Searchmont Metor Co			2450	2	Dunlop	7	
A 53. Fournier-Searchmont Motor Co	., E. B. Gallaher	8	2430	2	Dunlop	8¾	
A 56 Haynes-Apperson Co	Haynes-Apperson Co	6	1700	2	Long Distance	5	
A 58. Knox Automobile Co	Knox Automobile Co	6	1650	2	Fisk	7	
A 59Knox Automobile Co		6	1710	2	Dunlop	6	
A 60Knox Automobile Co	Knox Automobile Co	6	1700	2	Dunlop	7	
A 73. Fournier-Searchmont Co	R. A. Greene	8	2350	2	Dunlop	81/2	
	STEAM.				•		
B 5. Grout Bros	. Grout Bros	41/2	1300	2	Diamond	198/	113.15
B 6. Prescott Automobile Mfg. Co			1700	$\bar{2}$	Fisk	1274	85.05
B 7. Prescott Automobile Mfg. Co	. H. M. Wells	41/2	1650	$\bar{2}$	Fisk	14	79.05
B 22. Lane Motor Veh. Co	. Lane Motor Veh. Co	10	2100	3	Hartford	159/	93.25
B 29. Locomobile Co. of America			1925	ž	Diamond	1914	93.25 114.75
B 30. Locomobile Co. of America			1620	$ar{2}$	International	1072	89.25
B 64 *White Sewing Machine Co	. P. H. Deming	6′2	1750	$ar{2}$	Goodrich	61/6	
B 65 *White Sewing Machine Co	Windsor T. White	6	1750	$ar{2}$	Goodrich	0 7 9	6.00
B 66 *White Sewing Machine Co	. Morris R. Hughes	ő	1750	2	Goodrich	5%	6.00
B 67. Overman Automobile Co	. Overman Automobile Co.	41/6	1700	2	Fisk	9	9.75
B 75. Locomobile Co. of America	F W Lebing	31/2	1780	2	Hartford	1072	84.75
*Class B—Section II—Under strictly no	n-stop rules	J/2	2100	_		10	103.05
Weight includes fuel, supplies, equipme		da eac	ch				
11 CIBAL MICIAGES LACK Supplies, equipme	passengers at 100 poun				i i		

VEHICLES WHICH FINISHED,

·				No, of	Consum	ption of	
					Gasolene		
No. Maker.	Entered by.	H.P.	Weight.	gers.	Gals.		Stops,
A 2. Ohio Automobile Co				2	7		5 min.—loose clutch.
A 3. Ohio Automobile Co	. Adams & McMurtry Co.	. 12	2625	2	5		28 min.—hot crank journal.
A 8. Mors, Paris	. W. N. Beach	. 16		_	_		No record.
B 17. Grout Bros	.Grout Bros	. 61/2	1400	2	14		15 min.—for water not at
D 1111 Global Elouit							official station.
B 21 Prescott Automobile Mfg. Co	. F. E. Magee	. 41/6	1650	2	1034	71.35	omeiai station.
Stops: 2½ min., back firing in bu	rner: 11/2 min., back firing	r in bu	rner: 1	min i	nsufficier	it steem	on hill: 1 min inquitations
steam on hill.	, -,2,	,	, -		·	it steam	on min, I min., insumerent
A 24. Ward Leonard Electric Co	. Company	. 5	1500	2	6		2 min.—gas cut off.
A 26. Ward Leonard Electric Co	. Company	. 5	1425	$ar{2}$	43/4		2 mm.—gas cut on.
Stops: 4½ min., spark plug dirty	3 min., spark plug dirty	2 mir	spark	nlue	dirty		
A 34. Haynes-Apperson Co				4	un cy.		
Stops: 2 h. 41 min., hot engine;	41/4 min., oil cup: 23 min.,	gasole	ne and	chain	1 min	otorm o	ıntaln
A 35. Haynes-Apperson Co	H S Chanin	. R	1790	2	, , , , , , , , , , , , , , , , , , , ,	storm C	irtain.
Stops: 14 min., pump, hot engine	4 min snark failed: 1 h	1 min	1100	enlana	· R min	tolvina a	analana
A 36. Peerless Mfg. Co	Company	16	1050	9	8 8		
A 50. Peerless Mig. Co	· Company	. 10	1000	2	0		- minspark plug dirty.
A 41U. S. Long Distance	I W England	7	1790	2	3		- minspark plug dirty.
A 41U. S. Long Distance	W. Ishgianu	• •	1100	2	3		9½ min.—chain off.
A 47Panhard & Levassor	George Arents Tr	19	3200	4	•		2 min.—chain off.
Stops: 9 min., hot water in pum	n angina hat: 2 min mig	604 200	0200 1d	4	9		
Stoos: 8 mm. not water in pun-	h, cugine not o min, mis	ocu IUS	ıu.				

A 49Automobile Co	of America	J. H. Yockel	12	3100 4	934			
Stops: 17 m	in., spark plug shortci	r cuited; 6½ min., s	park plug dir	rty; 10½ min.,	broken c	hain; 4 min.,	chain off sprod	ket; 116
min., cl	ain off sprocket (misse	ed course at New R	ochelle to Je	rome avenue).			_	
A 55 Automobile Co	of America	. H. C. Cryder	$\dots 12$	2490 2	4			
Stops: 3 n	in., spark plug, brok	en connection; 4 mi	n., spark plu	ıg, broken con	nection; 4	7 min., coil; 1	min., crank s	haft.
A 62 A. Darracq &	die	. A. H. Tatum	9	1850 3	$7\frac{1}{2}$			
Stops: 30 s	ec., stalled on hill; 30	sec., stalled on hill	l; 11 min., fo	r water.				
A 72 Cottereau & Co		. Central Automobil	le Co —	1550 2	7			
Stone: 1 h	98 min hot engine 16	n min oil at Mian	ne 10 min	onsolene at M	ianna. 9 n	nin stalled (an hill· 1 min	hallete

Made it Twelve Miles.

Just what the speed limit for automobiles shall be is the point which the councilmen of Toledo, Ohio, find it hard to settle. The ordinance came up last week, and the above fact was soon brought out. The ordinance as introduced provided for a limit of 15 miles an hour. Various changes were proposed, ranging from 7 to 15 miles, but finally the ordinance was amended to read 12 miles an hour in all parts of the city, and then received its second reading on a tie vote. The ordinance provides for a license fee of \$4, and children under 15 years of age shall not be placed in charge of any automobile or motor carriage.

The vote is said to mean that unless opinions change the ordinance is likely to be defeated on its final passage. A compromise at 10 miles an hour would have secured easy passage.

Recent Incorporations.

Jersey City, N. J.-Interstate Ball Bearing Company, with \$1,000,000 capital. Incorporators-Frank W. G. Maack, Lionel C. F. Kellian and George White, Jr.

Jersey City, N. J.-German-American Steel Ball Company, with \$1,000,000 capital. Incorporators-F. W. G. Maack, L. C. F. Kellian and George White, Jr.

Utica, N. Y.-The Buckmobile Company, to succeed the Utica Automobile Company. The officers are A. J. Seaton, president; A. Vedder Brower, secretary and treasurer; W. H. Birdsall, manager and superintendent.

St. Louis, Mo.—The Halsey Automobile Company, with \$50,000 capital. Incorporators-Oscar L. Halsey, Augustus C. Halsey, Edward J. Snowden.

Dyke and His Goods.

It is a safe wager that in Catalogue No. 7 issued by A. L. Dyke, St. Louis, Mo., everything that an automobilist can possibly desire is to be found. From the complete car with tonneau body and all the latest devices to a sparking plug, everything is described and in many cases illustrated. Through the more than half a hundred pages one can go, finding something of interest on almost every one.

Received its First Test.

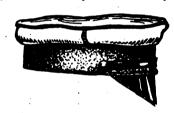
No little interest attaches to the speedometer which the Veeder Manufacturing Company are known to be experimenting with. It was fitted to one of the cars in the recent non-stop run and given a good test. No effort to exploit it is being made, however, as it is not yet ready for the market. It is of the fluid type.

on hill; 9 min., sparker. Class A-Gasolene vehicles. Class B-Steam vehicles.

Weight includes fuel, supplies, equipment and passengers at 150 pounds	each.
The following vehicles did not finish:	
No. Maker. Entered by. H.P.	,
No. Maker. Entered by. H.P. A 14. Cannstatt-Daimler, Germany Jefferson Seligman12	
A 18. Benz & Co., Manheim, Germany E. Clarence Jones10	
A 19. R. W. Coffee & Sons, Richmond, Va. Charles E. Miller12	,
A 20. Ohio Automobile Co Osborn W. Bright12	
A 25Ward Leonard Electric Co Ward Leonard Electric Co. 5	•
B 31Locomobile Co. of AmericaLocomobile Co. of America 6	Water pump broken,
A 37. Peerless Mfg. Co	t
C 46. Electric Veh. Co Electric Veh. Co	
A 48. Desberon Motor Car Co David S. Brown, Jr 8	Transmis- sion gear broken.
A 54. Automobile Co. of America Henry C. Cryder 9	
B 68. Overman Automobile Co Overman Automobile Co 47	Feed water meter broken.
Class A-Gasolene vehicles. Class B-Steam vehicles. Class C-El	

Would Have Done for the Prince.

Whether or not the "owners" cap depicted herewith owes its origin to the peculiar headgear affected by Prince Henry during



his recent visit to this country is not easy to say. But it bears a sufficiently strong resemblance to it to warrant one in believing so. Its distinguishing characteristic is its peak, which points sharply downward, so sharply, indeed, that is seems as if the wearer's eyes and even nose must be interfered with. Demmerle & Co., 248 West 23d street, New York, make it in both the well nigh universal black leather and with a tan top, the latter making a particularly effective combination.

Skinner's New School.

The De Dion Automobile and Storage Co., of Boston, Kenneth A. Skinner, proprietor, has leased the large lot in the rear of Stanhope street, formerly occupied by the N. Y., N. H. and H. Railroad, and will next week open a school of instruction. Lessons will be given daily to purchasers of all classes of motor vehicles, and the buildings on the ground will be occupied for storage and repairs. There is need of just such places of instruction, not only in Boston, but in other large cities.

It is now denied that the work being done on a tract of land near Lake Success, Long Island, is for an automobile racetrack for W. K. Vanderbilt, jr.

Making it Interesting.

A pleasant summer diversion has been arranged for the people of Winnetka, a suburb of Chicago. The Mayor "has taken steps to check the speed of automobilists who exceed the regulations which promise to be so successful that they might be copied elsewhere. He has had a rope stretched across a road where the automobilists are in the habit of testing their speed, and guards with stop watches stationed a distance each way from it, and whenever an automobile comes along that is trying to break the record the guards signal and the rope is suddenly drawn tight. This compels the automobilist to stop or have his machine raked fore and aft by the rope, and policemen are on hand to arrest him. The first afternoon three autos were caught in this way, and the Mayor promises to continue the same method until autom bile speeding is stopped in that locality. It may not make him President of the United States, but it will earn for him the gratitude of the residents of Winnetka."

Sets all Doubts at Rest.

After the performance of the three Knox cars in the non-stop run, criticism of the Knox air-cooled motor will be completely silenced. Both its makers and its users knew what it was capable of, but until this run it was not easy to convince the skeptics. Many of them were sure that the motor, even with the aid of the fan, would heat and refuse to work long before the hundred miles were completed. Now, however, they are left without a leg to stand on.

One Transportation Charge.

It is a popular impression that nearly everything connected with automobiling comes high. This is certainly true of transportation charges. A touring car shipped from a point near Boston to Chicago recently had marked against it express charges to the amount of \$176.



CANNON'S CLEVER CREATION

Steam Racing Car of Harvard Student a Success —Its Principal Features.

Of steam motor cars built purely for speeding none is likely to be more successful than the one recently designed and built by George C. Cannon. Mr. Cannon, who is a son of the bank president of this city, is a student at Harvard University, now in his sophomore year. He has for some time taken a keen interest in automobiles, and being extremely fond of mechanics, it was only natural that he should ultimately design one himself.

Last year he took an ordinary steam vehicle, and by changing it to conform to some of his ideas he increased its speed to such an extent that with it he had little difficulty in becoming cock of the walk as far as steam vehicles were concerned. Indeed, at the races at Providence last autumn Mr. Cannon entered the free-for-all race with it and for a considerable distance led the winner, a Winton car. Indeed, he only fell back when it became impossible for himself and his companion to pump water into the boiler fast enough to generate the enormous amount of steam that was required.

So well pleased was Mr. Cannon at his initial effort that he started last winter to build a complete machine. It made its appearance at Boston a few weeks ago, and on a blcycle track poorly adapted for automobile speeding it covered five miles in 9:09, beating the previous best record held by the old Cannon car. The present vehicle is thus described by the owner in a letter to the Motor World:

"The machine, as a whole, is extremely light and fitter only for track and straight-away use, although I have increased the rigidity of the frame by inverting an exceptionally strong gear, thus converting the arch tubing into a stress or tension member.

"The boiler, engine, tanks, seats, etc., rest on an angle iron framework, the angle being filled with square oak, thus making an easy material to bolt pumps and other accessories to.

"The boiler is 24 inches, with 1,050 tubes. It is surrounded by one inch of asbestos, held in place by a sheet iron covering, which also extends upward to form a stack and downward to form a scoop, which is of an exceptionally good design, heating and driving a large or small amount of air up through the tubes of the burner. This amount of air is controlled by the driver, thus running into the wind he can keep the quantity the same as running before the wind.

"The burner is of the ordinary type, with 450 tubes, probably the largest one ever constructed. It has three mixing tubes and a very serviceable pilot. I find that this burner gives more than sufficient heat.

"The engine is 3½x4 inches, two cylinder simple, geared one to one with the rear

wheels. This engine has been tested and is capable of over 1,000 r. p. m.

"I use gasolene pressure about 90 pounds, which gives the hotest fire I have ever seen, enabling me to generate steam from absolutely cold water up to 200 pounds pressure in a fraction less than two minutes.

"The water is carried forward in a 20 gallon tank, while the gasolene is aft. The men running the car sit tandem fashion. The driver steers the machine and operates the throttle, while the other man controls the fire (I only use an automatic when running around the city) and water. The steering is done by means of a horizontal wheel, which is connected, with absolutely no lost motion, to the front wheels.

"In racing steam is maintained at over 400 pounds, this steam being highly superheated before entering the engine.

"Although the accident of the Baker electric machine at Staten Island prevented my carriage from competing in the mile straight-

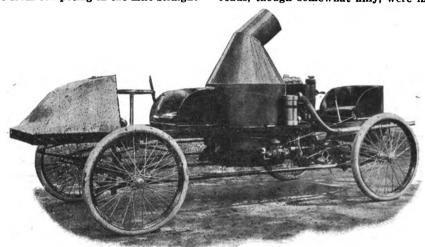
was equal to about 0:56 to the mile. The steam during this test remained rivetted at 300 pounds. I was not pumping water, however.

"In my opinion the speed of the carriage is due to perfect combustion of the gasolene, proper draft, an easy running car, small wind resistance and a high gear."

Sixty-Three Miles on One Charge.

While the radius of electric vehicles, made possible by existing batteries, is in the public mind, the run of Messrs. Howard S. and Bertram Borden from New York to Oceanic, N. J., made last week, is of more than average interest.

The start was made on Saturday, May 24, at 1 p. m., and the route was by ferry to St. George, Staten Island, thence to Tottenville, to Perth Amboy, and on to Oceanic via New Brunswick, Matawan, Keyport, Middletown and Redbank. As far as Matawan the roads, though somewhat hilly, were in good



away, I can give you a few figures taken by several responsible timers over a measured course, stating at the same time the action of the car, which may be of interest.

"1. May 18—One-third of a mile straight-away, rough road, pumping water; steam at start 250 pounds, at finish 240 pounds; time, 0:21 1-5.

"2. May 20—One-half mile straightaway; smoothroad, nt pumping water; steam at start 300 pounds, steam at finish 305 pounds; time, 0:29 4-5.

"3. May 24—One-third of a mile, circular concrete track (bad track for speeding), pumping water; steam at start 200 pounds, steam continually rises until safety valve blows off at 350 pounds, safety valve unable to take care of steam; time, for 5 miles, 9:09 3-5, breaking world's record for steam carriages by 0:31 1-5.

"4. June 4—Same thack as No. 3, pumping water (gasolene pump not working, had to use auxiliary); drizzling rain, very hard to keep machine on the track; steam at start 260 pounds, steam at finish 100 pounds; time, for 5 miles, 8:26 2-5.

"5. Over about a half mile course, with wind in my favor, roughly timed my speed

condition. From Matawan on, both hills and sand were encountered, but all difficulties were negotiated successfully, and Oceanic was reached in good time and with the power still strong. The cyclometer registered sixty-three miles, which, considering the roads traversed, indicates a most satisfactory performance for both vehicle and battery, especially so in view of the fact that both vehicle and battery were of standard type, and had been in regular service through the winter.

The car is one of the Electric Vehicle Company's Columbia phaetons, and is equipped with a forty-two cell battery of the standard Exide type, made by The Electric Storage Battery Company.

Imports Lead Largely.

British imports of motor vehicles and parts are undergoing a steady increase. During April 434 cars and cycles came into the country, their value being \$547,935. In addition, there were \$57,965 worth of parts imported, making a total of \$605,900, as compared with \$352,565 in March. For the first three months of the year the value of the imports reached \$1,368,475. During April the exports were valued at \$60,510.





To still further accent its position as an upholder of anarchy and the supporter of the new school of journalism which advocates every man and each newspaper being a law unto itself, particularly when it comes to dealing with the automobile, The Times took occasion to print a letter from one of its disciples wherein the correspondent showed the thoroughness of his training by declaring:

"It will be necessary to take the law into one's own hands, and for my part I should have no hesitation in shooting any man who injures me or mine in this way. Many of these machines are simply terrifying eyesores, and have no more right on the public thoroughfares than a locomotive."

With no desire to pose as an alarmist, really affairs are fast reaching a stage where the utterances of sensational papers and the acts of addlepated readers thereof are going to result in a tragedy which will give automobilism a blood baptism such as all, except the instigators thereof, will greatly deplore.

While I am on this unpleasant subject, allow me to remove the name of Judge Kellogg, of Yonkers, from first place on the roll of judicial dishonor and substitute therefor the name of Smith, Maistrate Smith, of Flushing. A local Long Island politician, objecting to sharing the road with an automobilist, got out of his carriage, secured a piece of what was in court mildly termed "hardened clay"—a brick is that, you know! -and, throwing it at the disliked automobilist, struck him in the face and severely injured him. When brought before Magistrate Smith the politician gloried in his act, admitted he threw the "hardened clay," and said the throwing resulted in just what he had intended it to. The automobilist asked that the politician be punished for the assault he had committed, but Magistrate Smith decided that in cases where politicians came in personal conflict with automobilists no offense against the law existed. In discharging the "hardened clay" thrower Magistrate Smith casually explained to the injured automobilist that he did so under paragraph 3 of section 223 of the Penal Code, which declares the use of force or violence is not unlawful "when committed either by the party about to be injured or by another person in his aid or defence." Verily this is the limit!

If in the near future when you are out on the road you should see a lady in an automobile somewhat the worse for wear and evidently in haste, take your hat off and remain uncovered until she has passed, because the chances are you are in the presence of Countess Irma Scaletti. The pa of the countess, who is the president of the Prune Picklers' Push out in California, bought his daughter an automobile and a count to run it, and the combination has so pleased the lady that she has announced that she will at once proceed to make them both earn their cost by using them to transport her across the continent. I can see heaps of trouble ahead for pa, the countess and the count, if the lady ever undertakes this little cross country jaunt she has planned. In such an undertaking counts are no account, and even the profits of a prunery but of little avail.

Did you ever experience a breakdown which called for an immediate and copious flow of language on your part, and find that you were not capable of supplying the flow? Have you ever encountered a full grown, perfectly developed specimen of the road hog and longed for a brand of vituperation superior to his? These and other like conditions need not worry you in future. One of those painstaking, thoroughgoing Germans has compiled a list of 2,500 carefully classified insulting expressions. Herr Shuch, the compiler, separates the 2,500 into five fundamental classes corresponding to the different kinds of persons that you may feel called upon to insult. Under proper headings are arranged insults for men, insults for women, insults for either sex, insults for children, and collective insults for syndicates, groups and corporations.

The convenience of Herr Shuch's idea is evident to all. Should, for example, you meet upon a tour one of those exasperating road hogs whose vituperative capabilities are only equalled by his determination to exhibit them to you, your remedy is at hand and your victory assured. Pulling from your pocket the "Schimplworter Lexicon," you open it at any point and begin delivering the contents in verbal chunks such as not even a road hog can stand. If you desire to communicate your opinion of an unsatisfactory motor or vehicle to the manufacturer thereof, and at the same time make yourself safe from a libel suit you have only to refer the offender to the aforesaid lexicon, page -, line -, and the thing is done in first-class shape. I can see a large and steadily increasing demand for the Schimplworter among automobilists. . . .

The course, after much research, was finally fixed on Staten Island, on a new boulevard they have there, a sort of show place on Sundays, place where blooded equines are stretched to their uttermost. Boulevard broad and well built, clean, unspotted macadam in the centre, on one side a soft, clayey stretch, for comfort and the slow family division. Mile lay through unused land, flanked on both sides by open meadows, here and there low underbrush, groups of trees. Along the first three-quarters of this mile no human place, nothing but virgin country—country waiting for the real estate sharp.

At the three-quarter point and for the rest of the way two or three hotels. Course at one point bisected by the Midland Beach trolley cars (courteously stopped during the races), and at three other points by minor roads, all boarded up and unusable on this day. Surely, a beautiful mile, a broad ribbon of road through a lovely green country. To the right a long hill, home studded; to the left acres of garden truck and a thousand bits of homes. These acres sloping gently down to the sea, just a mile from the course and with the blue waters visible at certain points, if you cared to look. All this situate seven miles from St. George ferry, and reachable by trolley, train and by systems of fine macadam, much appreciated by the five hundred motor folk who rode to the course that morning.

If things keep on in their present pleasant fashion I can see when there will have to be another S. P. C. A. organized. The new one will not entrench on the prerogatives of the original S. P. C. A., however, but will have for its object the prevention of cruelty to automobilists. As it is now, the animals have way the best of it; they have an organization to look after and protect them, but the automobilists haven't, though they really need it more.

How quickly evil associations corrupt good manners and morals was never more clearly shown than in the way The Times attempted to wriggle out of its responsibility for such assaults as the one made upon Mrs. Thomas. After weeks of discreditable attacks upon all automobilists for no other reason than that some of them were reckless and deserving of punishment, The Times, fallen from its former high estate as a reputable newspaper, and betraying in its editorial utterances the cowardice which is a natural accompaniment of untruthfulness, attempted to dodge its responsibility for the assault upon Mrs. Thomas by saying:

"The assault upon Mr. Thomas and his party was an atroclous manifestation of the spirit of malice and mischief native to the hoodlum element, whose only bringing up is in the street and with whom respect for law is dormant save when the instrument of its enforcement is near and visible. Mr. Thomas and his friends were going about their lawful concerns and were entitled to the protection which every citizen expects to receive."

Was ever there a more pitiful display of moral and editorial cowardice than this? After it had preached, published and upheld the doctrine of those who disliked automobiles taking the law in their own hands, it was the least The Times could have done to have lent its moral support to a citizen who had followed its advice to the extent of nearly killing an inoffensive woman. Such, however, is yellow journalism, even when it is practised by a newspaper which constantly tells its readers how it only prints what is fit to print, etc.

THE COMMENTATOR.



MERCEDES-SIMPLEX

Further Engine and Control Details—Sensational Features Promised Fail to Develop.

So much has been said about the transmission gear and the control of the Mercedes-Simplex racing car that the details of these parts have been awaited with impatience. The accompanying description and illustrations will make their construction plain.

being connected through slots in the steering column to the outside sleeve H, from which the movement is taken by a forked lever. The ignition lever J has a solid rod, which passes right down the centre of the steering column and through the hollow worm, terminating in a screw and nut, from the latter of which the motion is conveyed to the advance ignition gear. The mechanism for change gear is based on Daimler's patent, No. 9,805, 1899.

The first and second shafts of the speed gear, as well as the differential shaft have

with the low speed wheels when they are in the out-of-gear position. The object of the special change speed mechanism is to automatically release the drive, by taking the friction clutch out during the changing of gear witnout the use of the foot pedal. Its action may be traced by reference to Fig. 1, in which L is the control lever, which can be moved forward or backward in one of three quadrants, or when brought to its central position can be moved sideways from one to the other, a gap being provided in the dividing bars to admit of this. The

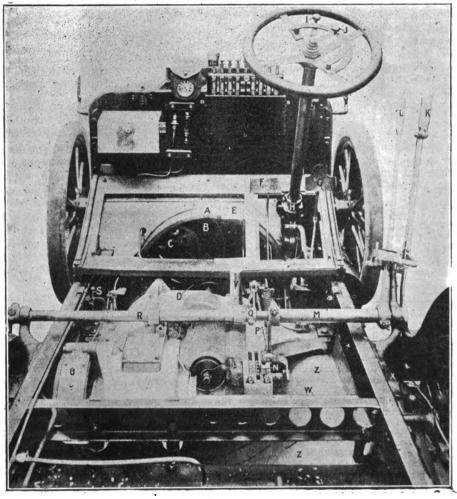


FIGURE 1.

It will be noticed that some of the sensational features ascribed to this engine by the early reports are not borne out by the engine itself.

The general arrangement of transmission and control gear is clearly shown in fig. 1, which view also gives a good idea of the construction of the fiy-wheel, whose light rim A and curved arms B (forming the fan) may be seen. The clutch is concealed, but some estimate of its size may be formed from the fact that it is wholly contained within the fly-wheel boss D. The regulating levers I and J, above the steering wheel, operate the throttle valve and advance ignition gear respectively. I is attached to a hollow spindle passing down inside the revolving steering column. This spindle has a quick-threaded screw and nut, the latter

their axis in the same horizontal plane, and the case itself is divided through the bearings into two halves. The lower portion has arms or carrying brackets, which are attached to the frame, while the top is more readily removable. The first shaft, on which the sliding sleeves are mounted, is provided with four long feather keys, instead of being squared, and the sleeves are grooved to suit. There are two sleeves, each of which carries a couple of gear wheels. The width of the first and second speed wheels is 30 mm., the third 25 mm. and the fourth 22 mm. The spur wheels on the second shaft are fixed, and the cross shaft is driven by a pair of bevel wheels (50 mm, width of face) in the usual manner.

For reversing, a broad pinion mounted on a suitable arm is moved into engagement control lever is keyed to one end of the sleeve M, which is free to rotate on, or slide along, the brake shaft R. At the other end of M is a lever carrying the toothed segment N, also a plain segment engaging with the key O. Three sliding bars are provided in the gear case; two of these have shifting forks, which engage with the sliding sleeves on the first shaft, and the other is connected to the arm which carries the reverse pinion. By cutting slots in the top portion of the gear case, these sliding bars are exposed for a portion of their length, and are cut to form racks, so that the toothed segment N may engage with them.

In Fig. 1 N is in engagement with the rack, which moves the sleeve carrying the first and second speeds, but by moving the control lever to the left the other racks may

be operated. To remove the possibility of damage by two sets of gears engaging at the same time, an interlocking arrangement of a simple form is provided. The sliding bars are notched on their under sides, and a groove is cut in the gear case, so that when they are all in their "out of gear" positions a rectangular hole is formed through which the interlocking key O can slide freely when actuated by the side movement of the control lever. The key itself has a notch exactly under the toothed segment N, so that the particular rack with which N is engaged can be moved while the other two are securely locked in the out-ofgear position. The small connecting rod P has one end jointed to the lever carrying N, and the other to a cam under an extension of the clutch pedal lever. When the control lever is in the out-of-gear position

possible in order to keep out the mud and grit. To equalize the pull, the wire rope passes up the short arm of the brake lever and through the hollow shaft R to the other hrake

FIG. 1.

A, flywheel rim.

B, flywheel arm.

- C, fibre spur wheel on admission valve camshaft.
- D. flywheel boss containing clutch.

E, clutch pedal.
F, foot-brake pedal.

foot-brake pedal.

- sleeve moved by lever I on steering wheel.
- L. accelerator lever.
- J, advance ignition lever.
- K, sprocket brake lever.
- L, change speed lever.
- M, sleeve of change speed lever.
- N. toothed segment.
- O, key to interlock gear shifters.

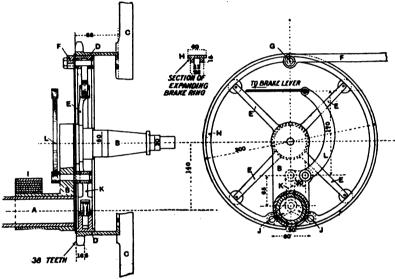


FIGURE 2.

this cam holds the clutch out, and does not allow it to grip again until the control lever has been moved sufficiently far to put the spur wheels right into gear.

The brake pedals F and G actuate brakes T and U, which are of ordinary construction, consisting of steel bands lined with cast iron. They are hinged at the top, and the operating levers are at the bottom in each case, so that they are double-acting.

The brake drums themselves are watercooled by the dripping of water on the inside of the rim. A separate water valve is provided for each brake, and the water is only turned on to the brakes which are actually in use.

The sprocket brakes are of special construction, as shown in Fig. 2. The sprocket wheel itself is quite a light shell, and is bolted to the spokes in the usual way. The expanding cast-iron ring H is anchored at the top by rod F, from the rear of the frame, and when not expanded is carried by the rollers on the fixed arms E. The wire rope from the hand-brake lever pulls the lever L, which acts through the link K on the powerful toggle formed by the arms J J. These sprocket brakes are encased as far as

- P, rod to cam which takes clutch out of gear during change.
- lever which takes clutch out of gear when hand brake is on.

R. brakeshaft.

S, valve for water to cool brake.

T, third brake.

countershaft brake.

case over spring which holds reverse pinion out of gear.

. countershaft.

X, countershaft brackets.

Y, petrol tanks.

Z, aluminium plate underneath gear. FIG. 2.

- A, tubular back axle. B B, forged axle ends.
- C, back wheel spokes.
- D, back wheel sprocket.
- E, stationary arms carrying brake ring supporting rollers.
- anchor rod from rear of frame.

G, anchor pin.

- H, expanding brake ring.
- I, back spring.
- J, toggle arms.
- toggle link.
- L. lever.

Henry Wick, of Youngstown, Ohio, is contemplating embarking upon the manufacture of automobiles. Some \$4,000 worth of machinery has already been purchased for the purpose.

GOOD MARKSMAN

Aimed for Automobilists Eye and hit it-Judge Commended him.

More effective, in some respects at least, than the shotgun remedy is the weapon put into the hands of autophobes by a Long Island justice. This local Dogberry had brought before him one Jeromus Rapalyea, charged with assaulting an automobilist named H. T. R. Kennedy by striking him on the head with what is variously described as a piece of mud, a piece of hard clay, etc.

Magistrate Smith, of Flushing, in discharging the prisoner, who boasted on the stand that he had thrown mud in the eyes of a chauffeur, said that when automobilists were driving through the country at an illegal rate of speed, endangering people's lives, they were a public nuisance, and should be treated as such.

Off the bench Magistrate Smith said later that a man, when he thought his life was endangered by an automobile, had a right to assault the chauffeur to protect himself.

Last Thursday Rapalyea was out driving with his granddaughter. Down the road an automobile came. The veteran was crowded up on one side of the road by the auto, and according to his testimony, his life was endangered.

He grabbed up a handful of clay and hurled it into Kennedy's eyes. Later he was arrested on a warrant charging him with assault. When he took the stand to-day he frankly confessed that he had thrown the mud.

"I aimed for his eyes," he said, "and I hit his eyes."

When the old man was discharged he left the courtroom with the remark that automobilists coming through Elmhurst in the future would have to be mighty careful how fast they went.

Frowns on Speeding.

Having special reference to a local accident which took place a short time ago, the Automobile Club of Bridgeport last week adopted the following resolutions:

"That this club publicly protests against all violations of the speed laws and that it cautions its members to so use the public highways as to give no offence to other users with whom the rights to the roads are shared.

"That this club favors the bringing to justice of all persons who wilfully speed their automobiles in such a manner as to recklessly menace the public."

A. L. McMurtry has severed his connection with the Adams & McMurtry Company, with which and the Packard cars he has been long identified. He will sail for Europe shortly.



MILE AND KILOMETER

What the Contesting Cars did in the Trials—Official Figures.

Four gold, five silver and three bronze medals have been awarded by the Automobile Club of America to the winners in the mile and kilometer trials on May 31. The performances on which these awards are based, together with a table of the times made by each contestant, are shown in the appended official table.

The sudden breaking off of the trials led to the abandonment of the projected second and third trials of many of the cars. Some of them were fortunate enough to get a second one before the Baker car started, and nearly all of these bettered their first attempts. The unfortunate ones had to stand "pat," on, in some instances, very mediocre performances.

The figures follow:

KILOMETER AND MILE TRIALS AWARDS. CLASS I—MOTOR BICYCLES.

CLASS I-MOTOR B			
No. Entered by. H. P.	Kilometer.		
2C. H. Metz (Orient) 31/4	0:43 3-5	1:10 2-5	Silver medal.
		lba l	
CLASS III—GASOLENE (a
5L. S. Thompson (Renault) 5	0:59	1:35 3-5	Gold medal.
9Lewis Nixon (Long Distance) 7	1:03	1:43 3-5	Silver medal.
6H. Ward Leonard (Knickerbocker) 8	$1:05\ 3-5$	1:45	Bronze medal.
•	000 + 0.00	0.11>	•
CLASS IV-GASOLENE (1			~
15Percy Owen (Winton)	0:47	1:17 3-5	Gold medal.
11Ernest Cuenod (Rochet-Schneider)16	0:56 3-5	1:22 4-5	Silver medal.
12Jefferson Seligman (Mors)12	0:57 1-5	1:32 3-5	Bronze medal.
CLASS V-GASOLENE (
30E. E. Britton and A. J. Levy (Mors)60	0:34 4-5	0:55 1-5	Gold medal.
23W. Guggenheim (Panhard)24	0:44	1:11	
			Silver medal.
25E. E. Britton (Panhard)16	0:5 9 3-5	1:36 4-5	Bronze medal.
CLASS VI—STI	EAM.		
32S. T. Davis, Jr. (Locomobile)10	0:46 1-5	1:12	Gold medal.
36H. M. Wells (Prescott) 4½	1:01 1-5	1:37 1-5	Silver medal.
	-		Silver Incual.
KILOMETER AND MILE	TRIALS	TÍM ES.	
CLASS I-MOTOR E	TCVCLES		
	Kilometer.	Mile.	
No. Entered by. H. P.			•
2C. H. Metz (Orient)	0:43 3-5	1:10 2-5	
CLASS III—GASOLENE (
5L. S. Thompson (Renault) 8	1:17	1:54 1-5	First trial.
•	0:59	1:35 3-5	Second trial.
6H. Ward Leonard (Knickerbocker) 8	1:05 1-5	1:46	First trial.
,	1:05 3-5	1:45	Second trial.
8 Ward Leonard El. Co. (Knickerbocker) 41/2	1:07 3-5	1:58	First trial.
6 Water Decidate 191. Oo. (Indicate: Societ) 1/2	1:15 2-5	2:03	
O Tamir Nimon (Long Distance) 7			Second trial.
9Lewis Nixon (Long Distance) 7	1:06 2-5	1:48	First trial.
	1:03	1:43 3-5	Second trial.
CLASS IV—GASOLENE (1,	000 to 2.000	lbs.)	
11Ernest Cuenod (Rochet-Schneider)16	0:56 3-5	1:22 4-5	First trial.
11 Dinest Output (1.00mot benderate) 10	0:53 2-5	1:26 4-5	
10 Tofferson Colleman (More) 19			Second trial.
12Jefferson Seligman (Mors)12	0:57 4-5	1:33 4-5	First trial.
	0:57 1-5	1:32 3-5	Second trial.
15Percy Owen (Winton)15	0:52 3-5	1:25	First trial.
	0:47	1:17 3-5	Second trial.
17F. A. La Roche (Darracq)16	1:03 4-5	1:44	First trial.
•	1:02 3-5	1:40	Second trial.
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CLASS V-GASOLENE (c			
22H. H. Rogers, Jr. (Daimler)35	1:10	2:26 4- 5	
30E. E. Britton and A. J. Levy (Mors)60	0: 34 4-5	0:55 1-5	
23William Guggenheim (Panhard)24	0:44	1:11	
25 E. E. Britton (Panhard)	0:59 3-5	1:36 4-5	
29Mrs. Howard Gould (Daimler)35	2:03 2-5	3:18 1-5	
. ,			_
CLASS VI—STE		4.40	
32S. T. Davis, Jr. (Locomobile)10	0:46 1-5	1:12	
36H. M. Wells (Prescott) 41/2	1:01 1-5	1:37 1-5	

St. Louis Club Incorporates.

The newly formed Automobile Club of St. Louis last week made application for incorporation papers. In the application the purposes of the club are the education of members and the public in mechanical sciences pertaining to the construction and skilful use and management of motor vehicles; to promote means for reporting the experiences of members and others in the use of these machines; to agitate the construction and maintenance of good roads and streets; to arrange pleasure runs, encourage contests and establish a clubhouse.

The club will be governed by a board of directors consisting of the officers and Jules F. Valle, George B. Leighton, A. Niedringhaus, John S. Carter, John Ring, jr., and Horace Rumsey.

Scarlet Fever Attacks Bostwick.

Albert C. Bostwick, the well known automobile enthusiast, is confined at his home, Orlenta Point, Mamaroneck, by an attack of scarlet fever. His physician says that the disease is not of the malignant kind, and there is na danger of a fatal result.

DEMANDS DAMAGES

Because Street was Excavated and his Automobile Smashed Into it.

The city of New Haven, Conn., is to be made the defendant in an automobilist's suit for damages arising from an improperly kept street. The complainant, George Lavigne, through his counsel, served notice on the city clerk last week for damages against the city.

Lavigne says that on May 20, while riding in his automobile, he ran into an excavation at the corner of Chapel and Howe streets. The machine became uncontrollable and in spite of anything he could do it swerved and battered against a nearby tree. The vehicle was overturned and Lavigne was thrown out. He suffered a sprained ankle and bones in one of his ankles were broken. He also sustained other injuries.

No amount of damages are claimed in the case. If the committee on claims, to whom the claim will be presented, does not award damages a suit in the court will result,

Omaha has a Club.

With a charter membership of 35, the Automobile Club of Omaha (Neb.) came into existence last week. Its membership embraces Omaha, South Omaha, Council Bluffs and contiguous territory, and an active season is projected.

The following officers were elected: President, A. I. Root, Omaha; vice-president, J. T. Stewart, Council Bluffs; secretary, Dalton Risley, Omaha; treasurer, Dr. P. F. Straub, Fort Crook; directors—A. I. Root, J. T. Stewart, D. Risley, F. P. Straub, T. W. Lamoreaux, R. H. Packard, T. B. Lacey, H. H. Van Brunt, F. N. Connor; road officers—E. E. Fredricksen, captain; A. K. Detweiler, lieutenant,

Milwaukee Club Organized.

After a preliminary meeting held several weeks ago, the permanent organization of the Milwaukee (Wis.) Automobile Club was effected on Monday. This meeting, which was held at the St. Charles Hotel, was attended by nearly two score persons. The following officers were elected:

President, Dr. Ralph Elmergreen; vicepresident, F. P. Rugee; secretary, C. G. Norton; treasurer, Frederick Pollworth. John Brennan and Dr. Sayles were elected trustees, and a committee consisting of Charles R. Davis, F. C. Courtney and D. Gillen was appointed to revise the constitution and bylaws, which were adopted.

Want to Run a Thousand Mile Test.

Now it is a 1,000 mile test that is proposed. Officials of the Chicago Automobile Club are reported to have written to the Automobile Club, of this city, to inquire if it will cooperate in an endurance test to be run from city to city.



What Winton Wants.

Not unless he passes the eighty-mile per hour mark this season will Alexander Winton, who is building a special speed car, be content.

"It has been demonstrated repeatedly that automobiles can be operated with safety at a speed of seventy-five miles per hour," he is quoted as saying. "I have driven them at that speed myself. I have no hesitancy in saying they can be driven eighty miles an hour in safety if the machines are properly built and are driven by a careful driver over a good road.

"At a speed of seventy miles or better the machine is liable to leave the ground at any time if it meets even a slight obstruction. A very small thing can cause a machine to go into the air. If one is travelling at from seventy to eighty miles per hour and goes into the air for only a second, the machine will jump from sixty to eighty feet, according to the speed. The great danger in that event is that it may not be pointing straight down the course. If it has changed direction when up, it requires quick action to straighten it out when it gets down to running again.

"Machines will be driven above eighty miles this season, and I will be one of the men who will do it. What we want is a speedway that has no waves. It is the waving surface that most easily throws a machine in the air. With a proper speedway, an expert driver and a properly built machine, eighty miles is not an unsafe speed."

Carried a Six Ton Load.

What is probably the largest motor vehicle ever built in this country was completed last week by the White Steam Vehicle Co., Indianapolis, Ind. It was made for a St. Louis firm. The vehicle has a carrying capacity of 12,000 pounds, and has 35 horse-power, with 225 pounds steam pressure. The platform is 25½ feet long and 8 feet wide. The carrying platform alone is 19 feet long, 6½ feet being taken up by the cab.

The wheels carry 12 inch tires. It is capable of maintaining a speed of six miles an hour, with its load of 12,000 pounds. In its trial trip the machine was loaded with 10,000 pounds of pig iron, and after a few miles around the city it was sent to the top of Michigan hill. The driver says the hill was taken with such ease that he does not believe the machine realized that it was going up an elevation.

The Week's Exports.

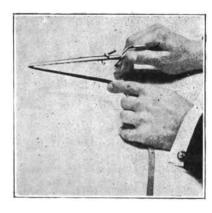
British Possessions in Africa—1 case autovehicle parts, \$750.

Cuba—1 case auto material, \$40. Liverpool—4 cases motor vehicles, \$99. London—40 cases motor vehicles and parts, \$15.604.

Mexico—1 case motor vehicles, \$1,000. Marseilles—1 case auto machines, \$50. Rotterdam—1 case motor vehicles, \$110. Southampton—1 case motor vehicles, \$1,200.

Punctures Repaired Instanter.

Admitting that the vulnerable spot in the single tube tire's armor was the difficulty experienced in repairing it on the road, the Diamond Rubber Co. some time ago set

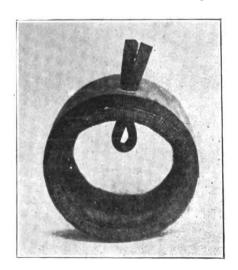


themselves to work to produce a device that would remove this objection. The result is the Diamond repair outfit, the workings of



which are made clear by the accompanying description and illustrations.

The outfit consists of an inserting tool,



three feet of rubber tubing, cement and tire tape. To repair a puncture or cut, place one end of the rubber cord under clamp as shown, draw rubber taut and pass over notched end of tool, and then under clamp on reverse side.

Be sure rubber is placed between points on notched end, so that tool can be forced into puncture easily. It is also necessary that rubber be drawn as tight as possible to secure minimum diameter.

After lubricating rubber thoroughly, force tool into puncture, forcing in and out several times to thoroughly cover the sides of the puncture with cement. On last stroke force tool into tire so that clamps some about two inches from outside of tire. Then release rubber by drawing clamps toward you. It immediately expands, adjusting itself to the shape of the cut or puncture and positively closes it.

Pittsburg Wants Cars.

Pittsburg is hungering for automobiles—their price, size, weight, speed or kind being apparently a secondary consideration—and with very small prospects of having her voracious appetite satisfied. Dealers in the Smoky City are a unit in asserting that they can't get anywhere near enough vehicles to go around.

"We are turning down orders almost every day now, just because we can't get the machines delivered promptly enough," said Arthur Banker, of Banker Bros. "The makers simply can't supply them fast enough to suit people. But we have sold a great many of them this season—something over 200 machines, I should say, in our three stores, here and in Philadelphia and New York."

"We have not been able to keep up with our orders at all," said D. N. Seely, of the Seely Motor Co. "All the manufacturers are rushed with work. Some of them are refusing to take orders for less than thirty day delivery. We have sold about forty machines this year, I should say.

"It is a queer thing, but those who have bought automobiles are the most likely to come back and buy another. They start with a small machine, and run it awhile and learn something about it, and then the next thing they want a bigger rig, after they get that they want a faster one. And so it goes; there are a number of men in town who have bought two or three machines."

"There is no use bothering with the business of renting machines out when it is so easy to sell them as it is now," J. B. Crookston, of the Pittsburg Automobile Co., remarked. "We have been having a rush of business ever since the beginning of the season, and it was only by securing almost the entire output of one concern's factory that we have been able to fill our orders with any kind of promptness. On the other machines that we handle, it is very hard to get deliveries in any kind of reasonable time."

The Rohl Automobile Co. has been formed at Whitney's Point, near Binghamton, N. Y.. by Edward Rohl, of Cleveland, and it will enter upon the manufacture of automobiles.



SEVEN AND FIFTEEN

These are Speeds at Which Cleveland Automobilists May Legally Travel.

Not to be out of fashion, Cleveland, Ohio, has its automobile ordinance. It took effect last week and is as follows:

Section 1. Be it ordained by the Council of the city of Cleveland that the owner or driver of any automobile or other vehicle propelled by motor power shall, before operating such vehicle, register with the City Clerk his name, residence and description of the vehicle owned or operated by him, and the City Clerk shall enter such name, residence and kind of vehicle in a record and shall furnish to the person so registering a number to correspond to the number appearing in the record and aluminum figures four inches high and 2 and one-half inches wide, and the applicant shall pay to the City Clerk the sum of one (\$1.00) dollar, which shall be deposited to the credit of the general fund. Such owner or driver shall place such figures on the rear of the vehicle, so that they will be in plain view constantly, and such figures shall be kept clean and bright. He shall cause one lamp to be kept lighted on each side of the vehicle during the hours of darkness. He shall, when registering with the City Clerk, sign an agreement that, whenever requested by an official of the city, he will furnish the name of any person operating his vehicle an automobile. No person shall operate an automobile or motor vehicle upon any of the streets, alleys, boulevards, park driveways or public grounds of the city without displaying in the manner herein set forth the number and figures furnished to him by the City Clerk.

Sec. 2. No person, driver or operator in charge of any automobile or motor vehicle on a public street, alley, boulevard, park driveway or public ground shall drive, operate, move or permit the same to be driven, operated or moved at a rate of speed faster than at the rate of seven (7) miles per hour within a radius of three-quarters of a mile from the east and west ends of the Superior street viaduct, but not including the viaduct, and outside of said radius at a rate of speed faster than at the rate of fifteen (15) miles per hour.

Sec. 3. The driver or operator in charge of an automobile or motor vehicle shall, when signalled by the occupant of any vehicle propelled by horse, stop said automobile or motor vehicle until the other vehicle has passed.

Sec. 4. Every automobile or motor vehicle shall be provided with a bell or horn, which shall be rung or blown by the operator whenever there is danger of collision or accident. The driver or operator of every automobile or motor vehicle shall be governed by the commonly accepted rules of road traffic, by turning to the right hand side in meeting

vehicles and teams and persons moving or headed in the direction opposite to that in which he is moving, and by turning to the left hand side in passing vehicles, teams and persons moving or headed in the same direction in which he is moving.

Sec. 5. Any person who shall violate any of the provisions of this ordinance shall, upon conviction thereof, be fined in any sum not exceeding fifty (\$50) dollars.

Bears His Honors Well.

When the New Jersey Automobile Club cast about for delegates to represent it at the birth of the American Automobile Association, which auspicious event took place at Chicago last March, and selected W. J. Stewart as one of its representatives, it builded well. At the convention Mr. Stewart made a distinctly good impression. He



W. I. STEWART.

took part in the debates, not as a voluminous speaker, ever ready to project himself into discussions, but as one whose words were few, well weighed and to the point. Quiet, self possessed, well groomed, his clarity of vision was remarked, his grasp of the essential facts commented upon. When, a few weeks later, the announcement was made that Mr. Stewart had been appointed chairman of the highly important Race Committee of the new Association, there was little difficulty in placing him, and slight hesitation in prognosticating for him a successful handling of the many problems that were almost certain to come up for settlement, The accompanying photograph is a good likeness of Mr. Stewart, who is a member of the New Jersey Automobile Company of Newark, N. J.

Knox Raises Price.

The Knox Automobile Company, Springfield, Mass., is out with an announcement that the price of the Knoxmobile is now \$1,100. To keep pace with the demand for this clever vehicle, with its waterless motor, the factory output is being so arranged that after July 1 the turnover will be twelve vehicles per week in place of eight, as heretofore.

NOISE AND SMELL

These and Visible Steam Exhaust Perturb Some St. Louis Law-Makers.

As if such restrictions as an eight mile speed limit in the city and six miles in the parks were not onerous enough. St. Louis automobilists are to be still further harassed. A bill is to be introduced in the Municipal Assembly to regulate the use of automobiles in the public parkways, and perhaps on certain of the new boulevards to be built under the provisions of the charter amendments. The bill will be modelled after the Chicago law, which prohibits the operation in South Side Park and on several of the boulevards of any automobile which makes an unnecessary amount of noise or gives off a quantity of steam or offensive odors.

The ordinance now in force in St. Louis was passed last December, and is as follows: "Section 1.—No automobile, locomobile or horseless vehicle propelled by the use of electricity, gasolene or steam, by whatever name such vehicles may be known, whether used for purposes of pleasure or business, shall be moved or propelled along, over or upon any public street, avenue, boulevard or other place place, at a rate of speed exceeding eight miles per hour, and no such vehicle shall be moved or propelled in any public park of the city at a rate of speed to exceed six miles per hour.

"Section 23.—Any person violating any of the provisions of this ordinance shall, on conviction, be subject to a fine of not less than \$5 nor more than \$500."

Coults, His Opinion.

No wonder the husband of the late Baroness Burdett-Coutts does not have a high opinion of automobiles. The expatriated American offered his harness horses at auction last week and they brought very low prices, a circumstance ascribed to the increasing use of motor vehicles. At luncheon, therefore, the husband of the late Baroness relieved himself in the following manner:

"The automobile," said he, "is an unknown, undiscoverable, irresponsible, gogglefaced creature, dashing about country roads, leaving behind him an evil smelling, dusty trail."

International Tire Stocks.

Users and others interested in the tires made by the International Automobile and Vehicle Tire Co. will hereafter be assured of ready deliveries, as the company has arranged to carry stocks at the following places in New York:

International Automobile and Vehicle Tire Co., 346 Broadway (New York Life Building, Room 912); Broadway Bicycle and Sundry Manufacturing Co., 7-9 Warren Street; the Cortlandt Cycle and Supply Co., 9 Cortlandt Street; Bowman Automobile Company, 50 West 43d Street.



THE ECONOMY

OF THE

White Steam Carriage

IS NOT LESS REMARKABLE THAN ITS RELIABILITY.

Take, for example, the three White's entered in the A. C. A. 100-Miles Non-Stop Contest, May 30th.

THEY ALL WON NON-STOP CERTIFICATES,

ANI

IN THE CONSUMPTION TEST,

No other steam vehicle approached their records.

THEY CONSUMED, RESPECTIVELY:

5 ³ ⁄ ₄	gallons		6	gallo	ns
61/2	of	and	6	of	
9	gasolene		934	wale	er.

COMPARE these figures with those of the other vehicles, and recall the record of the White in all other public tests, and you will understand

WHY THERE IS NO OTHER CARRIAGE IN THE WHITE'S CLASS.

CATALOG ON REQUEST.

WHITE SEWING MACHINE COMPANY,

(AUTOMOBILE DEPT.,)

CLEVELAND, OHIO.

2 Union Square, New York, N. Y.
609 Main Street, Buffalo, N. Y.

509 Tremont Street, Boston, Mass.

12 Woodward Avenue, Betrott, Mich.

300 Post Street, San Francisco, Cal.

300 Rose Building, Cleveland, Ohio.

The Week's Patents.

700,871. Rubber-Tire Setting Machine. John K. Williams, Akron, Ohio. Filed March 18, 1901. Serial No. 51,665. (No model.)

Claim.—1. In a rubber-tire setting machine, the combination of arms mounted to rock on the axial line of the wheel to be fitted, and bearing wire-gripping devices near their free ends, with means independent in action of the wire-gripping devices for drawing the free ends of said arms together, substantially as shown and described.

Tubstantially as shown and described.

700,848. Variable Speed Governor. William J. Still, Toronto, Canada. Filed April
23, 1900. Renewed April 10, 1902. Serial
No. 102,262. (No model.)

Claim.—1. A variable speed governor comprising a crank attached to a revolving support held in suitable bearings, a spring controlled arm pivoted to said crank, a lug placed in the path of movement of said arm so as to operate said spring controlled arm at each revolution of said revolving support, as described, a guiding plate placed in the path of movement of said arm so as to guide the movement of said arm so as to guide the movement of said arm above or below said plate as the speed of the support rises or falls, and means in the path of said arm, being operated by same, for regulating the speed of said revolving support, as set forth and for the purpose specified.

700,895. Joint Closer for Rubber-Tire Setting Machines. Joseph A. Burrows, Akron, Ohio, assignor to the Goodyear Tire and Rubber Co., Akron, Ohio. Filed July 31, 1901. Serial No. 70,402. (No model.)

Claim.—1. In a machine for bringing together the ends of solid rubber tires, the combination with a pivot to support a wheel hub, of a lever journalled at one end on said pivot bearing a sliding block, having rollers to press the sides of said tire, means for causing said rollers to approach and recede from each other, and bars secured to said block, substantially radial to said wheel having sliding straps thereon with blades to pass under said tire, substantially as shown and described.

700,898. Electrode for Electric Accumulators. Edward J. Clark, Stratford, England. Filed Jan. 6, 1902. Serial No. 88,559. (No model.)

Claim.—An accumulator plate, consisting of a frame, a series of vertical rods crossing the same, a series of trough shaped horizontal plates practically integral with said rods and a mass of plumble oxid held by said trough shaped plates, the latter being rolled into said shape on said oxid, thereby compressing and holding the latter substantially as set

700,902. Motor Vehicle Frame. Walter A. Crowdus, Chicago, Ill. Filed June 25, 1901. Serial No. 65,942. (No model.)

Claim.—1. A vehicle frame comprising front and rear axle supports, upwardly extending arms thereon, side bars connecting said arms on said axle supports and struts or braces which connect said side bars with said axle supports, substantially as described.

2. A vehicle frame comprising front and rear axle supports, upward and downward projections thereon, side bars which connect said upward projections and struts or braces which connect said side bars with the downward extensions of said axle supports, substantially as described.

700,926. Vehicle. Bohn C. Hicks, Chicago, Ill. Filed Nov. 10, 1899. Serial No. 736,494. (No model.)

Claim.-1. In a vehicle, a frame supported

laterally by one or more wheels on each side of said frame operatively connected thereto to have an independent rotating movement in planes at right angles to the planes of their revolution, and a steering wheel independently mounted and operatively connected with said frame for steering the same, to permit vertical as well as lateral movement of said steering wheel independently of said frame.

700,950. Motor Vehicle. Arthur C. Krebs, Paris, France, assignor to Ste. Ame des Anciens Etablissements Panhard et Levassor, Paris, France. Filed Aug. 9, 1901. Serial No. 71,517. (No model.)

Claim.—1. The combination with a motor car having a motor shaft, a driven shaft, and intermediate motion transmitting mechanism, of a brake for said mechanism, an operating lever of said brake mounted directly on the casing of said mechanism, and means for suspending said casing movably relatively to the framing of the car, whereby the wedging of the shaft of said mechanism in its bearings is avoided.

700,981. Variable Speed Gearing. Simon de Ploeg, St. Maurice, France, assignor to Ste. de Ploeg, H. Colliez Loustau et Cie., St. Maurice, France. Filed July 20, 1901. Serial No. 69,125. (No model.)

Claim.—1. In a gearing, the combination of a pair of toothed gears adapted to be moved relatively to each other in an axial direction for engagement or disengagement, said gears being normally out of engagement, and means for pressing said gears yieldingly toward each other to bring them into engagement.

701,073. Speed and Direction Changing Mechanism. Emile L. P. Mors, Paris, France. Filed Feb. 15, 1902. Serial No. 94,223. (No model.)

Claim.—1. A speed and direction changing mechanism for motor vehicles, comprising a driving shaft, a driven shaft, a clutch between the two, such clutch when in operation adapted to give the highest speed, spur wheels movable lengthwise on the driving shaft, a second shaft geared to the driven shaft and spur gears carried by said second shaft each adapted to gear with one of the lengthwise movable spur wheels of the driven shaft to produce varying speeds and a third spur wheel adapted to mesh with one spur wheel of each of the two shafts to reverse the speed, substantially as described.

701,140. Hydrocarbon Oil Engine. Dwight A. Briggs, Evart, Mich. Filed Feb. 4, 1902. Serial No. 92,521. (No model.)

Claim.—1. In a hydrocarbon oil engine, a cylinder, a rib extended spirally around said cylinder and having openings through its coils, a jacket secured to said rib, an oil supply pipe coiled around the cylinder between the coils of the rib, a vaporizing chamber into which said coiled pipe discharges, a mixing chamber communicating with said vaporizing chamber and having communication with the interior of the cylinder, and a valve for controlling said communication, substantially as specified.

701,253. Battery: George S. Bennett, San Francisco, Cal., assignor to Joseph W. Thatcher, San Francisco, Cal. Filed Aug. 6, 1901. Serial No. 71,095. (No model.)

Claim.—1. A battery comprising in combination, a casing, a cap therefor, a voltaic pile, a sleeve secured in the cap and forming one terminal of the battery, a conducting and supporting rod for the pile, forming the opposite terminal of the battery, said rod extending through but insulated from the

sleeve and serving to firmly connect the battery elements to the cap.

701,279. Vehicle-Wheel and Tire Therefor. Louis F. Altpeter and Robert C. Alpeter, Chicago, Ill. Filed Nov. 12, 1901. Serial No. 82,061. (No model.)

Claim.—1. In a tire for vehicle-wheels, in combination, a rim having cavities in the periphery therof, tufts of bristles seated in the cavities and disposed radially as to the wheel, and a covering of rubber filling the interstices of and covering the tufts and forming the body of the tire.

701,302. Wheel. George H. Crosby, Albion, Me. Filed Jan. 11, 1902. Serial No. 89,311. (No model.)

Claim.—1. In a vehicle-wheel, a rim, a hub provided with a plurality of radial spokeretaining cases, a spring set in each of said cases, means for confining said springs in said cases, and a series of spokes, each spoke having one end secured to the rim and the other end to one of said springs midway its length, whereby the hub is yieldingly supported.

701,307. Electrical Ignition Apparatus. Henry T. Dawson and Henry A. Dawson, Canterbury, England. Filed Jan. 25, 1901. Serial No. 44,643. (No model.)

Claim.—1. In electrical ignition apparatus, the combination with a dynamo having an armature of interrupted-pole typo, of a loose pinion, a first wheel fixed to the said loose pinion, a second wheel fixed to the armature, a double wheel gearing with the first and second wheels respectively and means for moving the axis of the said double wheel about the axis of the armature, substantially as and for the purpose set forth.

701,319. Primary Battery. Eugene M. Fishell and William R. Clymer, Cleveland, Ohio, a corporation of New Jersey. Filed Oct. 14, 1901. Serial No. 78,550. (No model.)

Claim.—In a voltaic cell, in combination, a combined containing vessel and negative electrode, an annular perforated partition within said vessel-electrode merchanically and electrically connected to the bottom thereof, depolarizing material packed in the space between said partition and vessel-electrode, an exciting solution in said vessel, a zinc electrode immersed in said solution, a cover sealed to said vessel, a vent for said vessel above the exciting solution, and means for opening and closing said vent, substantially as specified.

701,379. Vehicle-Wheel. Denis H. O'Meara, Worcester, Mass. Filed Feb. 16, 1901. Renewed Nov. 4, 1901. Serial No. 81,078. (No model.)

Claim.—1. In a vehicle-wheel, the combination with an inner rim to which the spokes are secured, of a supplementary rim removably secured to and bearing against said inner rim; an annular series of double flat metallic springs removably secured to said supplementary rim; an encidding metal band removably secured to said springs; and an outer composite tread of metal and flexible material, removably secured to said encircling metal band.

701,422. Steam-Generator. Alfred Thompson, Geneva, Ohio, assignor to the Geneva Automobile and Manufacturing Company, Geneva, Ohio, a corporation of Ohio. Filed Sept. 10, 1901. Serial No. 74.926. (No model.)

Claim.—1. In a steam-generator, the combination of a tube bent up and down and then coiled and closely nested leaving a central space, a tubular spiral coil occupying this space and connected at its upper end with the outlet end of the tube first men-

tioned a tubular coil located below the tubes heretofore mentioned and connected with the lower end of said tubular spiral coil, and a tubular coil located above the other tubes and connected with the outlet end of the lower coil, and a casing which incloses said tubular system, substantially as specified.

701,434. Vehicle-Tire. George A. Weidely, Indianapolis, Ind., assignor to the G. & J. Tire Company, Indianapolis, Ind., a corporation of Indiana. Filed Oct. 8, 1901. Serial No. 77,948. (No model.)

Claim.—1. The combination, in a vehicle-wheel, of a tire open on the under side and having ribs adjacent to the open portion, the inner surfaces opposite said ribs being inclined or tapered, an inner supporting-band formed to rest upon said inclined or tapered surfaces, and a channeled wheel rim or felly composed of two parts adapted to fit over the ribs on the tire may be firmly grasped between the parts of the rim or felly and the inclined surfaces of the inner band, and also conveniently released therefrom.

701,464. Water-Cooling Apparatus for Motor-Vehicles. Edward T. Burrowes, Portland, Me. Filed May 7, 1901. Serial No. 59,116. (No model.)

Claim.—1. In a motor-vehicle, the combination with a body and motor carried thereby, of a water-cooler mounted upon the vehicle and having and open-ended cooling-space into which the water is discharged and directly exposed to air currents created by the movement of the vehicle, means for preventing the water from flowing out of the end of the cooling space, and means for circulating the water, substantially as described.

701,496. Muffler for Steam or Other Engines. Thos. S. McKinnie, Cleveland, Ohio. Filed July 25, 1901. Serial No. 69,612. (No model.)

Claim.—1. A steam muffler having a series of walls overlapping each other and spaced apart to form an open circuitous passage for the steam, an absorbent, condensing and cushioning material between said walls at each turn of said passage, and means to hold said material in place at said turns, substantially as described.

701,505. Internal-Combustion Engine. Fritz Reichenbach, Berlin, Germany. Filed Nov. 23, 1901. Serial No. 83,475. (No model.)

Claim.—1. In an internal-combustion engine, the combination, with means for supplying and exploding a weak mixture of air and fuel in the engine-cylinder, of means for supplying and burning a supplemental fuel charge in said cylinder after the explosion of the weak mixture.

701,533. Driving Mechanism for Motor-Vehicles. Clarence C. Bramwell, Hydepark, Mass. Filed Sept. 14, 1899. Serial No. 730,-401. (No model.)

Claim.—In a motor-vehicle, a driving wheel or wheels, a motor, intermediate power-transmitting means, including a worm and meshing worm-gear, a flywheel rotatable with the worm, a brake for said flywheel, controlling means for the motor, and actuating connectings between said means and the brake, to govern the latter.

701,558. Tire for Vehicle-Wheels. Charles J. Gilling, Chicago, Ill. Filed Feb. 19, 1902. Serial No. 94,771. (No model.)

Claim.—A time comprising a single treadtube having spaced integral partitions across the bore thereof and a continuous slot extending entirely around the tire through the partitions and the rim-face of the tube, whereby the tube and the partitions may be spread open laterally, and disconnected separately-removable unperforated cork segments filling the spaces between the partitions.

701,631. Vehicle Running-Gear. George George H. Sherman, Detroit, Mich. Filed March 31, 1902. Serial No. 109,690. (No model.)

Claim.—1. In a vehicle running-gear, the combination of a frame, the axles, springs interposed between the axles and frame and pivoted to the latter, and side springs joined at the centre to the frame and coupled at their ends to the axles.

2. In a vehicle running-gear, the combination of a frame, the axles, springs interposed between the axles and frame, side springs attached at their centre to the frame and at their ends to the axle, the coupling which unites one end of said springs to the axle being adjustable.

701,633. Differential Gearing. Roscoe G. Small, Bayonne, N. J. Filed Dec. 30, 1901. Serial No. 87,661. (No model.)

Claim.—1. A rotary vehicle-axle; a disk provided on its opposite faces with clutch devices keyed to said axle; gears of different diameter mounted at opposite sides of said disk and adapted to be separately but not simultaneously engaged by the clutch devices thereof, and means for moving said gears into and out of such engagement, substantially as described.

701,695. Electric Igniter for Explosion-Engines. Emmery H. Fahrney, Chicago, Ill. Filed Sept. 10, 1900. Serial No. 29,508. (No model.)

Claim.—1. In an electric igniter the combination of the electrodes, means for separating the same, a friction-clutch having its driven member operatively related to one of said electrodes for bringing them together and closing the circuit therethrough, a positively-moving dog engaging the driving member of said clutch for rotating the same, a cam or trip for releasing said dog from said driving member, a slide to which said cam or trip is connected and means for adjustably securing said slide in place, substantially as set forth.

701,754. Safety Fuel-Tank for Automobiles. Thomas W. Moran, Louisville, Ky. Filed March 28, 1901. Serial No. 53,202. (No model.)

Claim.—1. A safety fuel-tank connected with a source of pressure, and provided with a feed-pipe to a burner, said tank having a valve device consisting of two tubular members, each member having a chamber, and an annular shoulder or abutment in rear of said chamber, one of said members having a valve-seat at its inner extremity, the screw-sleeve connecting said members together, the coil-springs in the chambers of said members and having a bearing against said abutments and the ball-valve between said springs, and inclosed thereby, substantially as specified.

701,755. Oil or Gasolene Can. Lewis E. Morris, Edgar H. Morris and Charles L. Schmucker, Dixon, Ill. Filed Feb. 5, 1902. Serial No. 92,705. (No model.)

Claim.—In an oil can the combination with a can provided with a cover, of a pump-barrel mounted in said can and passing through said cover, a pump mounted in said barrel and constructed to raise oil, a cup surrounding the upper end of said barrel and constructed to catch the oil raised by said pump, a larger cup containing said smaller cup and designed to catcr the overflow therefrom, a tube fitting transverse apertures in said cups, an L-shaped spout rtoa-

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INDIANAPOLIS, INDIANA.

tably mounted in said tube, and a housing surrounding the outer end of said tube, there being apertures in said cover within said housing to permit the return to the can of leakage through said tube, substantially as described.

701,767. Vehicle-Hub. Edward Sendelbach, Terre Haute, Ind. Filed Feb. 5, 1902. Serial No. 92,633. (No model.)

Claim.-1. A vehicle-hub, consisting of a wooden body provided with a central enlargement-having its ends lying substantially in planes perpendicular to its axis, metallic shells surrounding said body and provided with flanges fitting tightly against said enlargement, and lips on said flanges compressed upon the outer surface of the enlargement.

Reversible Galvanic Battery. 701.804. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Co., a Corporation of New Jersey. Original application filed March 1, 1901, serial No. 49,453. Divided and this application filed June 20, 1901. Serial No. 65,285. (No model.)

Claim.-1. An active element for a reversible galvanic battery, comprising a conducting-support, an electrolytically-active oxid of a specific magnetic metal other than iron carried by said support, and a flake-like inert conducting material intimately mixed with said oxid, substantially as set forth.

2. An active element for a reversible galvanic battery, comprising a conducting-sup-port, an electrolytically-active oxid of a specific magnetic metal other than iron carried by said support, and flake-graphite intimately mixed with said oxid, substantially as set forth.

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A famous Paris coachmaking firm have designed a motor vehicle body which possesses some novel features. It is of the favorite Limousine type-that is, closed in-and the back seats are arranged to give seating capacity for three people, and the front one for two persons. The entrance is in front by a sliding door; all the windows can be removed in order to have plenty of air in sum-

mer time, and can be entirely closed for winter and wet weather. At the rear part of the car a large tool box is arranged to open outwardly, and extra tires can be carried on the top of the car. The mud guards are built up close to the car, enabling wicker baskets to be secured on the top of them.

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In the Speed Trials on Staten Island Boulevard, May 31st, one of the Pres-REVERSE LEVER OPERATED cott's that made the Endurance Run, a regular stock machine, nothing special on it, made the mile in 1:37 1-5, thus proving conclusively that the Prescott's are safe, speedy and reliable.



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	RUNNING GEAR New Design—Extra Heavy.	
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	STEAM AIR AND STEAM	中一
	WATER PUMPS, Both operated from the seat,	
TWO PASSENGERS.—FRONT CLOSED.	FOR FOUR PASSENGERS.—	FRONT OPEN.
other refinements, added to the Presco	cott Performances in the above Two Events, prove our straight-out claim are reliable under all conditions.	as that Prescott Car
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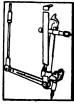
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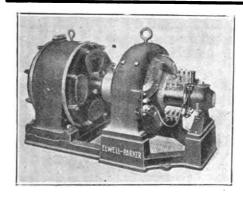


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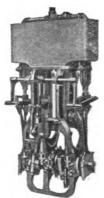
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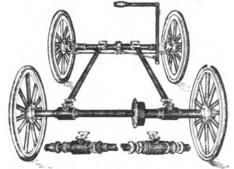
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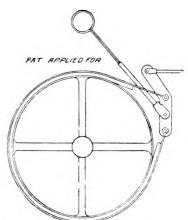
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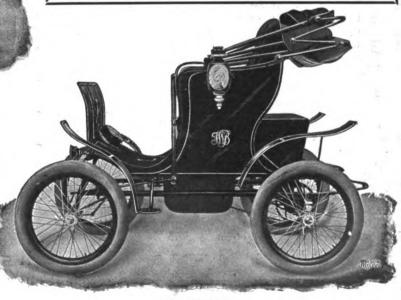
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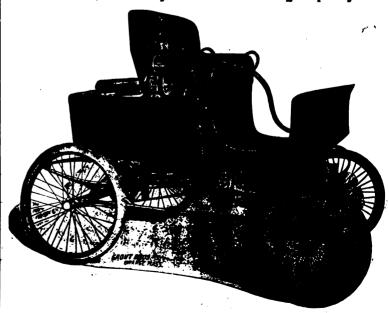
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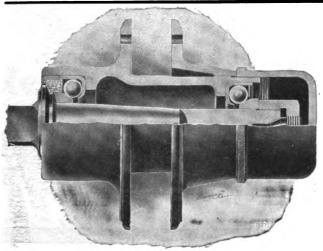


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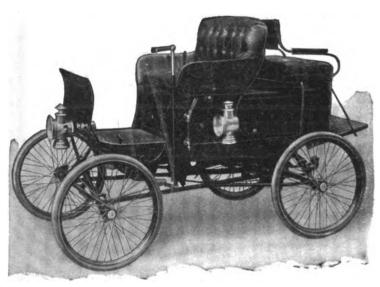
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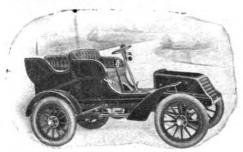
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THE MOTOR WORLD.

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Volume IV.

New York, U. S. A., Thursday, July 3, 1902.

No. 14

RENAULT'S DOUBLE VICTORY

Winning Car and Driver in Paris-Vienna Race so Named—Panhard Next.

Crack cars and crack chaffeurs went down to defeat together in the Paris-Vienna race which ended at the latter place on Sunday. It was a severe test of men and machines, and the survivors have much to congratulate themselves upon. The pace was fierce, and this accounts for many of the casualties, the contestants most in evidence in the early stages of the race dropping out of sight before the Austrian capital was reached.

The declared winner, Marcel Renault, and his car have figured in other French races, but always in a more modest way. In his light Renault, light that is, by comparison with its Brobingnagian rivals, having but 30-horse power, he reached Vienna first, and made better time than any other car, viz., 26 hours, 34 minutes and 30 seconds for the entire distance. Pressing him closely was a 75-horse power Panhard, driven by Henri Farman, which was less than 25 minutes behind him.

Quite unexpectedly the International Cup, or Bennett Cup, as it better known, leaves France, the Englishman, Edge, securing it; at least, this will be the case unless the desperate efforts to secure his disqualification should be successful. His three French competitors, Fournier, Girardot and de Knyff, all met with a Didents which necessitated their withdrawal. Edge, who drove a 70-horse power Napier, also had mishaps which delayed him materially, but did not prevent his reaching Vienna.

The cabled accounts of the race are, of course, fragmentary and incomplete, not-withstanding their length. It is difficult to obtain from them a clear account of the four days' events.

Of the more than 200 entries a little less than 140 started, almost one-half of them being of the heavy type.

The terrific pace set up at the start is best shown by the reported time for the first stage. The Chevalier Rene de Knyff, the leader at this point, is reported to have covered 253 miles to Belfort in 4 hours and 6 minutes, an average of more than 62 miles an hour. The notable casualties for this day were Fournier. Foxhall Keene and W. K. Vanderbilt, Jr., the first two being put out altogether and the latter left for in the rear.

On Friday the racing cars turned tourists for the nonce, and traversed Switzerland at a leisurely pace. Bregenz, on the Austrian frontier, was reached that evening, and the race resumed the next morning. As on the first day, de Knyff led the procession.

Between Bregenz and Salzberg, 209 miles, de Knyff fell by the wayside, meeting with an accident which threw him out of the race, and with his disappearance went hope of the Frenchmen that the Bennett Cup would remain in their country. The Baron de Forest was the leader for the day, he covering 200 miles in 4 hours and 40 minutes. On Sunday the men entered on the homestrech of their charge across half Europe. Marcel Renault was the first to reach Vienna, followed by Count Zborowsky, with Maurice Farman third.

The finish was watched by an immense gathering, including local dignitaries. The Austrian Automobile Club received the racers at the Prater and the scene was marked by great enthusiasm and cheers.

Immediately afterward, however, the trouble began. Protests flew thick and fast. Renault did not stop at the last enecking station, but dashed on through the outskirts to Vienna, and fir it a time it was thought he would be disqualified. Count Zborowcki was ultimately placed behind the two Farmans, although he finished ahead of them, for what reason is not known.

The worst row, however, is over the Bennett Cup. Edge is accused of having accepted the assistance of some peasants in getting his car out of a ditch. This he strenuously denies, and the allegation is freely made that the Frenchman, furious at having the cup taken from them, have trumped up this charge. At this writing no decision in the matter has been rendered.

The official classification is as followe: Heavy automobiles—M. Henri Farman, with a 50-horse power Panhard, first; time, 26 hours 34 minutes 30 seconds. M. Maurice Farman, with a similar machine, second and Count Zborowski, with a 40-horse power

Mercedes, third.

Light automobiles—M. Marcel Renault, with a 30-horse power Renault, first; time, 26 hours 10 minutes 47 seconds. M. Edmond, with a 40-horse power Darracq, second; M. Barras, with a 40-horse power Darracq, third; M. Hemery, with a 40-horse power Darracq, fourth, and M. Marcellin, with a 40-horse power Darracq fifth.

SELDEN PATENT SUIT

Makes Progress in Spite of Unexpected Delays —Will be Ready Soon.

Although nothing has been heard for more than a year of the litigation over the Selden patent, it has not been because the litigants have been idle. As a matter of fact, it was hoped that the famous case, which is before the United States Court for the Southern District of New York, would be ready for hearing at the next term of the court. It has been delayed, however, by the introduction of a large amount of evidence, and is not quite ready.

President George H. Day of the Electric Vehicle Co. is strongly of the opinion that a decision favorable to his company will be rendered. He says that it had acquired its rights under the Selden patent after very careful consideration of all prior patents, both American and foreign, and after very thorough investigation of allegations made in various publications with regard to the early experimental and temporary use of boats, cars and other vehicles which it had been attempted to propel by gasolene motors.

The investigation led the company to believe that the claims of the Selden patent were of a controlling nature, and their acquisition represented an investment which the officers of the company were bound to protect. Therefore they promptly brought suit in the United States Court for the Southern District of New York against a company making and using road vehicles propelled by the same type of motor as that described in the Selden patent and mounted upon and connected to the vehicle in the same way.

This suit was commenced on July 13, 1900 and has been prosecuted with vigor since that time. A large amount of evidence has been taken on behalf of the defendants in the endeavor to show early uses of similar vehicles, but Mr. Day said that nothing had been developed which was not known and fully considered by his company prior to its acquisition of the rights.

GORY-MINDED GIBSON

Carries a Pistol and Will Shoot on Sight—Autoists Must Take to Fields.

Laws were not made for such as Dr. William Gibson, coroner and physician of Suffolk County, Long Island. He rises sueprior to them, defles them, scorns them; declares that there is no law of the land or State (sic) that can compel him from shooting automobilists whose misfortune it may be to encounter him on the road.

The gentle doctor carries a "gun," and is ready to use it on occasion. He applied for and obtained permission from a local justice of the peace to carry it, stating with frankness and emphasis just why he wished to arm himself with it. He has already held up one automobilist, Turpin-fashion, and read him a lecture punctuated with pistol flourishes, and is now waiting for a second victim. The story told by the Brooklyn Eable runs in this wise:

"Dr. William B. Gibson, one of the coroners of Suffolk County, who resides in Huntington, carries a big loaded revolver for the declared purpose of shooting down any tutomobilist who refuses to slow down and get to one side of the road while he passes with his spirited team, which is described as being very mettlesome and easily terrified at every noisy approach of the automatic vehicles.

"The doctor, who is a political power in his county, declares vehemently that in the case of the large racing road machines he insists that they be driven into the fields when he aproaches, and at the point of his steadily leveled revolver he has, he declares, on several occasions compelled automobilists to obey his commands. The doctor takes the position that the roads are made for the convenience and use of residents of the county, who in passing over them in the purcuit of their daily vocation or pleasure should not have tehir lives endangered by any person who may choose to operate the noisy machines propelled by steam.

"The average automobilist of the racing sort not alone, declares the doctor, is utterly regardless of the fright into which he throws the horses he meets, but adds to the terrifying din of his machine by infernal noises meant to act as warnings.

"I am compelled to use the roads on business in going to and from my patients and in attending to my duties as coroner," says the doctor, "and I do not propose to have my life endangered by any person, and there is no law of the land or the State that can compel me to desist from taking due measures toward protecting myself from being maimed or killed."

"At the recent dinner of the examining doctors of the Royal Arcanum, held in Manhattan, Dr. Gibson declared in the presence of half a dozen brother physicians that he would certainly shoot and kill any person who while controlling an automobile refses to stop and get to one side to permit his borse or team to pass in safety and without endangering his safety. 'And there is no power in the law controlled by judge and jury that will convict me for any such action based upon a desire for self-protection,' he insisted.

"Coroner Gibson, although an officer of the law, has secured a permit from a justice of the peace to carry a revolver and in applying for the weapon he made a statement embodying the specific reason he had in wishing to go armed. Soon after securing the permit the coroner, while driving along one of the country roads surrounding Huntington, was met with one of the heavy automobiles known to the country side as red devils. According to the story of the occurrence, as told by the official himself, the automobilist must have received a decidedly strong impression of the ability of the hayseeds to protect themselves.

"Standing up in his carriage the doctor levelled his revolver at the approaching automobilist and loudly shouted at him to halt. The sight of the leveled pistol had its effect, and when the astonished owner of the terrifying machine had obeyed the command he was further ordered, in no uncertain language, to give more room for the passing of the frightened horses.

"Now, get into the field," yelled the doctor, "or I'll shoot you down." The manner accompanying the order was convincing and into the field went the automobile.

"Now, get out of that machine and come here," yelled the coroner, still pointing his big revolver.

This command was also obeyed, and then the doctor delivered this ultimatum: "I am compelled to use these roads in my business, and I don't propose to have my life placed in jeopardy for your pleasure, and any time you see me coming along and you don't get out of my way, I'll shoot to kill. I want you people to understand that you have no right to make the highways dangerous and are to be treated as should any one who would threaten my life or my limb."

The doctor relates this scene with considerable gusto and dramatic force, and he declares that one of the results of his stand is that on the roads about Huntington the au tomobilists are beginning to show a proper regard for the rights of the people who pay for the maintenance fo the highways."

Tours and Fetes.

The Mid-European Motor Car Club is or ganizing a tour from Berlin to Hamburg. A start will be made from the capital on July 4, each party taking its own route. A general meeting of the tourists and a flower fete will be held in Hamburg on July. On the 7th the tour will be continued to Kiel; on the 8th to Lubeck, on the 9th to Schwerin, Berlin being again reached on July 10. Altogether the tour extends to about 420 miles.

TOURISTS ARE FAVORED

Can Now Bring Automobiles Here Without Paying Duty on Them.

By an order issued by the Treasury Department on June 20, and directed to all customs officers, tourists or others who bring automobiles into this country for a temporary stay may do so without the payment of the heavy duty heretofore demanded of them.

"The regulations of the Department of June 3, 1902 (T. D. 237666)," says the order, "regarding the free entry of bicycles of tourists brought to this country for temporary use not exceeding three months, are hereby extended so as to include automobiles brought by tourists from abroad for a stay not exceeding three months, but in such cases formal entry will be required and a careful examination and appraisement made at the port of importation and a bond with penalty in double the estimated duties under article 563 of the customs regulations, in the appended form, will be given by the importer, conditioned for due exportation of the automobile covered thereby-within three months from date thereof."

The form of bond follows:

"Whereas a certain automobile described as (a) — was imported at the port of —, in the —, whereof — ls master, from —, on the — day of —, nineteen hundred and —; and whereas the above-bounded principal has this day entered the same at the port of —, under laws of the United States, providing for entry without payment of duty of (a) — for (b) —, as per entry No. —, in which the said automobile is also described or set forth:

"Now, therefore, the condition of the above obligation is such that if within three ments from the said date of original importation the said automobile shall be so withdrawn for actual export beyond the limits of the United States, then the above obligation to be void; otherwise to remain in full force."

Panhard's New Undertaking,

The Lohner-Porsche patents for France, Italy and Great Britain have been purchased by the Panhard-Levassor Co. These cars, which were described in the Motor World a short time ago, and which are propelled by a combination of gasolene and electricity, will be manufactured by the famous French firm and called the Panhard-Porsche care.



DUSTLESS ROADS

Experiments Conducted Abroad With Tar and Petroleum Meet With Success.

But for the coming of the automobile road users would probably have put up for future centuries with the dust nulsance, just as they have done in the untold ones of the past. But the motor vehicle renders indifference scarcely possible. The evil is greater, therefore more bitterly complained of. Municipal and county authorities are beginning to give the matter of allaying the dust serious attention.

So numerous have been the automobiles at Nice this year, and so inconvenient and objectionable the clouds of dust raised by their large diameter pneumatic tires, that the Nice authorities are already experimenting on the surface of the road leading from Abattoirs to Monaco with gas tar, and the results already obtained are full of promise.

The municipality of Paris will also make trial of the same material on a section of the Route Nationale No. 21 at Champigny, as soon as the weather permits. The Touring Club of France, always eager and auxious to associate itself with any trials which may make for the greater ease and comfort of automobilists and cyclists using the roads, has voted \$100 for experiments to be made at the same time and on sections of the same route, with heavy American petroleum, and with the heavy mineral oil obtained from the shales of Autun.

This tarring or oiling the road surfaces is according to La Locomotion, the only means known at present of preventing the rising of a cloud of dust after the passage of a fast car. M. de Saunier, having been informed that certain roads and avenues of a town called St. Gaudens had been treated with both oil and tar, he wrote the local road officials for information as to the results. This official replied that for the past twelve years particular road surfaces in St. Gaudens had been treated with tar with the best effects, and that he confidently advised the use of this dust preventer to his brother officials.

The use of heavy oil had entirely prevented both dust and mud from accumulating on the surface of the roads upon which it was used. But to obtain the best results, the surfaces dealt with should be well exposed. In northern aspects and shaded places the treatment did not prevent the appearance of mud, although after drying the surfaces again united and became smooth, easy running, and dust preventing, no matter how great the drouth. Roads treated liberally with tar or the heavy oil were impervious to water, and therefore mud did not form, even on the north lying portions in the summer. In winter, however, such surfaces became very slippery after white frosts, owing to the hard condition they

then acquired. M. de Saunier points out that the testimony of this expert is sufficient to show that road surfaces can be made both dustless and mudless by the use of heavy oils, and that where dust particularly has been found a great nuisance to dwellers by, and users of, the highway, a sure remedy is to hand.

But M. de Saunier also points out that it is only necessary to watch cars running over dusty patches of road to realize that much of the trouble is caused by the thoughtless design and fixing of the exhaust silencer, the exit holes in which are so positioned that the issuing exhaust itself raises a cloud of dust in addition to that stirred up by the wheels.

There is also another cause which is not mentioned—the lack of truth of some wheels and tires. If a wheel is much "out of truth," or a tire somewhat unequal, much more dust is raised than from the passage of an accurate wheel and tire.

An Eye-Opener From Kalamazoo.

Priced at a figure under \$400, weighing less than 300 pounds, and carrying either two or three persons, such is the automobile which the Kalamazoo Cycle Co., of Kalamazoo, Mich., expects to place on the market shortly

The vehicle will be an automobile, not a motor cycle. That fact is made plan by the Kalamazoo company, who write to The Motor World that the vehicle will have neither saddle nor pedals. Referring to the sample vehicle which has been in use for some little time, they all:

"The automobile is light, weighing less than 300 pounds, has a narrow tread, and will go through a three-foot door. There are two seats, tandem style, the forward seat being wide enough for two persons. A 3 horsepower air cooling gasolene engine is used, which, with the low gear, will carry two persons over most roads at from five to fifteen miles an hour."

Paris-Vienna Tourist Section.

The tourist section of the Paris-Vienna event numbered about fifty cars. The start was made on June 19, the following route being traversed: Thursday, June 19, Paris to Auxerre; Friday, June 20, Auxerre to Dijon; Saturday, June 21, Dijon to Neuchatel (Switzerland); Sunday, June 22, Neuchatel to Interlaken; Monday, June 23, Interlaken to Ragatz; Tuesday, June 24, from Ragatz to Sargans and thence across the Austrian frontier to Innsbruck; on Wednesday, June 25, from Innsbruck to Toblach; on Thursday, June 2, from Toblach to Klankanfurt; on Friday, June 27, from Klanganfurt to Graz, and then from Graz to Vienna.

The longest day's run was about 12 miles, and the shortest about sixty-two miles. It is an ideal voyage. Switzerland and the Tyrol by the route which has been chosen will be a revelation to those who make the journey for the first time.

IGNITION PROBLEMS

Some Methods Which Depend on Catalytic Action—Great Simplicity.

Although electrical ignition has, for motor car purposes, completely ousted the incandescent tube system, there is still plenty of room for improvement in ignition devices. A method which has of late been given some attention is that in which heat generated within the cylinder or explosion chamber is utilized to ignite the charge.

This may be that due to compression, as in the Diesel motor; it may be heat from a previous explosion stored in some part so located as to be fairly well insulated from cooling influences, or it may be heat generated by the action of certain absorbent bodies, such as spongy platinum, etc., upon hydrocarbon gases and gaseous mixtures. Ignition apparatus employing the heat generated in the last-named manner has received considerable attention in France during recent years, and a number of commercial devices of this kind are now upon the market.

There are two kinds of ignition apparatus depending upon catalytic action. In the first the hydrocarbon gas acted upon by the absorbent body is derived from a special source, and the entire device follows somewhat the lines of an incandescent tube igniter, dispensing, however, with the chief objection to the latter—the exposed flame.

The other type of apparatus employs the charge used in the cylinder for generating the power, and requires, therefore, no special gasolene tank and carburettor for the igniter. This system is of extreme simplicity, but has the disadvantage that it only begins to operate after the motor has been running for some short time—about a minute—since the catalytic action is not sufficient intense to raise the absorbent body from the ordinary temperature to the ignition temperature during the extremely short period when mydrocarbon gases are in contact with it. Some auxiliary ignition device must, therefore, be provided.

Difficulties could also be expected if this form of ignition were to be applied to a throttle controlled motor, but these might possibly be overcome by providing means, interconnected with the throttle lever, to vary the cubic contents of the ignition chamber. It must be admitted, however, that the a pplication of the phenomenon of catalytic action to explosion motor ignition seems to open up a new and promising field of invention.

Will be in Operation Soon.

It is expected that the Mobile Transportation Co., which was incorporated a couple of weeks ago, will have 'buses in service in less than two weeks. Eight round trips a day will be made from Mullica Hill and Pitman Grove to Woodbury, N. J.







Published Every Thursday
By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING.
154 Namau Street,
NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Paris Office, 2 Rue d'Abbeville,				
Subscription, Per Annum [Postage	e Pa	ùd]		\$2.00
Single Copies [Postage Paid] .				Cents
Foreign Subscription				\$3.00

invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The GOODMAN COMPANY.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the facilities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649. Cable Address Motorworld.

Entered as second-class matter at the New York, N.Y. Post Office, November, 1900.

NEW YORK, JULY 3, 1902.

Placing the Responsibility.

Just what might have been expected has happened in this city in regard to automobiles, and that section of the press which has done so much to egg on roughs and incite them to riot are expressing surprise and regret that their teachings should have borne their logical fruit.

Just what would have happened to the cowering woman and child in the automobile at Seventh avenue and Fifty-ninth street, this city, last week, after the vehicle had knocked a woman down, is problematical, Accounts differ as to the composition of the been made up large of Poles; another version is that it contained many well dressed men and women. But no matter which is the nearer the truth, there seems to be no doubt whatever that they were bent on mischief. One outrage, such as haling out the occupants of the vehicle and overwhelming them with reproaches, would probably have

led to another, and there is no telling where it would have stopped.

It has really come down to this—that the lawless element, and many others never classed as lawless, have come to believe that the automobile is an intruder, the presence on the streets of which is tolerated only with an ill grace, its owners and users fair game for any sport, fit victims of any attacks that are not attended with too great danger.

This belief has been created by the prolonged and insistent outcry against it and its users.

Foremost in the attack have been journals which bear the cloak of respectability and spurn any effort to fasten on them any charge of "yellowness." They have been more violent than the avowedly "yellow" journals, have far outheroded Herod, and have, because of their previously acquired reputation, dealt more telling blows at law and order than would otherwise have been possible. There is nothing worse than the spectacle of a good man gone wrong.

Yet these very journals, the head and forefront of the offending, shrink from the logical result of their teachings.

They are pained at the outcome, condemn the conduct of the Frankensteins they have done so much to raise, and express mild surprise that they have been raised at all.

There is scant difference between the journal which "hopes" that some method other than the bullet will suffice to bring law-breaking automobilists to their senses and the ruffian who applies for a permit to carry a pistol, avowing his purpose to use it at the first opportunity. Or between the actual perpetrator of an assault and the one who incites him to his lawless act.

It is to be hoped that The Times and The Tribune, which have offended so often and so grievously in these particulars, will see whither they are tending and spike their guns ere it is too late.

Must Suspend Judgment.

Until the smoke of battle which now obscures our view of the Paris-Vienna duel rises and permits us to otbain a clearer idea of its lessons it will be impossible to do more than speculate on the successes and failure there developed.

Has the light car really scored a decisive victory over the heavy type, which in former contests swept everything before it and had no real competitor?

Or is it that the heavy cars have been

scaled down with too ruthless a hand in order to meet the weight requirements without sacrificing any of the enormous power held to be essential in these speedy flyers of the roads? Have designers eliminated weight with a too unsparing hand and retained power regardless of consequences? It would seem a little this way, but as no indication of anything of the kind was noted in the trials of the vehicles referred to, this view of the matter will be accepted only upon the submission of proof to bear out the contention.

The race has been run and the calculation of the results is still going on. Following their appearance will come the pleasant task of deduction, of probing for the why and wherefor of things, and of arranging them to suit one's ideas.

At this writing we can only be sure that the world famous event has been a success—successful in its management and in its outcome, demonstrating that it has a right to live and warranting the prediction that it will continue to be run for many years to come.

They Like to Tinker.

Does the average automobilist really desire to hasten the time when the perfect vehicle will replace the one of many faults he now possesses?

It is at least doubtful. If the question were put to him he might reply offhand in the affirmative; in fact, the chances are that he would; but if he had time for reflection there is at least room for doubt in the matter.

The railroad train or the steamboat, the trolley car or the cab—none of these possess any marked interest for their users. They are perfect, or approximately so, and are used solely as a means of conveyance. Should anything go wrong a momentary interest is taken in them, but when the wrong has been made right the aforetime listnessness resumes its sway. The passenger has nothing to do with the running of the vehicle. Why should it possess any interest for him?

"An automobile is just like a yacht," a brand new automobilist remarked to us the other day. "When I had my yacht I liked to know that it was in the water down at the wharf and that it belonged to me. I would go down to it and busy myself with entirely unnecessary details, thicker at the sails, the rigging or other parts, and get myself into a pleasurable condition solely by

reason of making myself believe that I was 'making the wheels go round.' Now, I find myself doing the same way with the automobile. Why, I don't believe I would like it half so well if there was never anything to do to it."

That a large class of users take this view is beyond controversy.

Where Reform is Needed.

There is one section of the automobile business where Reform—Reform with a big R—is sadly needed.

Reference is had to the places where repairing is done, both on a big and a little

As is always the case, there are good repairmen and well conducted shops. But they are in a grievous minority. Not only this, but they do not seem to be increasing as they should. The proportion of good to bad remains about the same.

The owner of a car, whether it be one of the modest, one seated, moderately powered, inexpensive kind, or its assertive and luxurious brother, with its big engine, roomy tonneau body and high speed, is obliged to give serious attention to the matters of storage and repair. He cannot afford to run things on the happy-go-lucky plan; if money is no object to him his time is, and he wastes the one quite as much as the other by patronizing an incompetent or careless repairmen

The time will come, of course, when everything pertaining to the care of automobiles will receive due attention.

But that time is nto now, and the automobilist who is well served is fortunate, and usually he knows this quite as well as any one else.

Could not Guard Here.

It is interesting, perhaps instructive, to note that tire troubles played a very prominent part in the fortunes of the contestants in the Paris-Vienna race.

Many a good venture was brought to grief by this prolific cause. Barks which bore the fortunes of their makers or sponsors set forth, every precaution taken, every possible weak spot safeguarded—save the one that it was impossible to guard against; and to it the wreck was due, a wreck in many cases complete and irretrievable.

It is a pity to reflect on it all. What might have been and what is proved to be widely differing things, and when the blow

came there was nothing to do but to submit with the best grace possible.

To neutralize or non-penalize tire troubles or tire stops was plainly impossible. So each operator had to set forth, hope in his heart, strong in the confidence of success if—a great big if—the gods were only good to him in the matter of tires.

And how many there were to meet their Waterloo on those fateful three days! First and foremost, Fournier, the winner of the previous Paris-Berlin, this year brought to grief by an ignoble puncture or cut!

Others, only a little less noted, bore him company. They were a goodly crew, and we may be sure that their reflections were not pleasant ones when it was finally borne in upon them that their chance had gone for this year.

The Only Certain Safeguard.

Never, probably, will the time come when it will be needless to dwell upon the importance of having good brakes and them in perfect order.

In heavy traffic the operator of a motor vehicle is but too apt to take great chances. He will weave in and out among pedestrians and vehicles, confident in the knowledge that his car can be handled to infinitely greater advantage than anything else on wheels. He will accelerate his pace at one moment and check his impetus at another with the utmost sharpness.

To do this a good brake is, of course, essential.

Should it fail to act at a critical moment an accident—sometimes a serious one—is likely to happen. It will not do to rely too much on reversing the engine or on cutting it out and depending on its inertia to check speed. Frequently it is found to be quite inadequate for the purpose, and trouble will result.

There is only one certain way to avoid trouble: Have an efficient brakes, or brakes, and keep it or them in order.

Then you will never be at a loss to stop when you want to.

Getting at the Facts.

There is a lot of sound common sense in the plan of the editor of La Locomotion, who propounds questions to his readers from time to time, the replies to which are frequently full of interest. In one issue he asked his readers to give their opinion as to what part, or assemblage of parts, in an automobile most particularly require improvement. In other words, he asks. To what particular part of the car should the constructor devote his chief attention? What should he first seek to bring to a state of perfection?

It is almost too much to expect perfect frankness on these and similar points. However much the automobilist may be provoked by shortcomings on the part of his favorite vehicle, he likes to put the best foot foremost, and is apt to minimize mishaps, trivial or otherwise, which may occur.

But a discussion of such matters is always of value, for it frequently leads to the discovery and correction of faults which might otherwise lurk concealed or be made little of by their makers and others interested.

A Matter of Balance.

Owners of double cylindered vehicles who occasionally find that only one cylinder is doing its full work may find a solution in the telling of the following experience:

Late last fall, while out riding in a two cylinder vehicle, along with a well known motorist, it was noticed from the exhaust that only one cylinder was up to the full work. At first little attention was given to the trouble, as it was thought that it might be some little matter which would remedy itself. After a while this hope was given up, and a start was made to locate the trouble. After looking at several parts, the spark plugs in particular, and finding everything in proper order, the owner remembered that he had that morning fitted a new spring to one of the intake valves.

There was no more guessing indulged in, as it was at once realized that the fault was to be found in the springs of the intake valves. The new spring was much stronger than the remaining spring, and of course the valves were not opening with balanced timing.

One of the courtesies that are appreciated, notwithstanding the inability to accept them, is in evidence at the rooms of the Automobile Club of America. It is an invitation from the Austrian Automobile Club to be present at the finish of the Paris-Vienna race on June 29. It is stated that the amphitheatre of the Prater will furnish storage facilities for all the visiting vehicles that will be on hand.

Who ever heard of anything but a white ghost? No one, surely. Yet H. R. H. the Duc des Abruzzes (whoever he may be) has a gasolene car which he has dubbed the "Red Ghost."





In the not very distant future the bookmaker, with his friend and ally, the promoter, is most surely going to "get out after the money" with an automobile. In plain English, there's going to be professional motor vehicle racing. The absence of any racing rules or a national organization of enough importance to even by courtesy be alleged to control automobile racing in this country is going to aid the gentleman who bets and the one wno promotes materially when they conclude to take a hand in automobiling. I am writing this with a knowledge of certain things which removes my prediction as one from the realms of probability and places it well upon the list of things sure to happen.

A man who has tried everything from financing a faro bank to promoting a cake walk, and who has made money out of his profession, came to see me recently and asked me if I had a copy of the rules "governing" automobile racing. I showed him a hodge podge aggregation of meaningless words which those who had paid the printer for setting them up declared were regulations govering American automobile racing. When my visitor had finally worried through the list he said:

"You don't call these things rules for 'governing' races do you? Why, man alive, they ain't anything but permissions to wrangle!"

What he said I knew was true, but his asking for the rules in the first place put me on to the fact that he was preparing to blossom out as an impressario of motor speeding.

Dr. Gibson, of Huntington, L. I., is a sufferer from motor dementia in its most acute form. The doctor sees visions of pink petroleum pests everywhere, and in his saner moments he raves about "red devils," which he says he believes are trying to run over and destroy him. To protect himself against these awful visions of his automobilized brain, Doctor Gibson has bought himself a miniature gatting gun in the shape of a revolver, and announces that he is prepared to add all automobilists to the number of his patients whom he has in a more professional, but equally deadly manner already aided in passing into the great unknown. To show the doctor's mental condition it is only necessary to say that he declares he recently met an automobilist on the road whose face or vehicle he did not like. Promptly pulling his rattling gatling the doctor says he made the automobilist stop, get out of his vehicle, walk over to where the doctor behind his leveled gatling sat enthroned in his carriage. Then the doctor delivered a lecture to the cowering automobilist, bade him cease to cross the Huntington, L. I., path of Doctor Gibson and not to dare to return to his automobile until

the doctor had driven his medical self and his carriage out of sight. Some day Doctor Gibson's mental pictures will appear as facts to him and he will actually attempt to hold up an automobilist with his medical popgun. When this happens Doctor Gibson will be in grave danger of finding out what an awful inconvenient thing it is for even a Long Island country doctor to hold an autopsy on himself.

I don't attempt to explain the whys and the wherefores of the decrease, but the facts are, according to the statistics of the Department of Health, that there are 8,660 horses and 1,323 stables less in New York to-day than there were six years ago. In 1896 New York was burdened with 73,746 horses and 4,649 stables, whereas to-day there are but 65,086 of the animals and 3,326 of their residences. Six years ago I don't believe there were six automobiles in the entire State of New York, while to-day more than 2,000 of the vehicles are licensed and probably as many more are evading the licenses which the law demands. Straws show which way the horse goes. See the "straw" in these figures.

When the Spanish gentleman resident in the Canary Islands recently announced that he was prepared to grab bunches of electricity from the surrounding atmosphere, I commented on the Don's claims and intimated that I had visions of the universal electric vehicle. Accept my apologies. No Spanish canary bird is going to knock-out the great American eagle. The electric vehicle isn't going to have any runover for the automobile stakes, not while grocer Henry Soeder, "a poor German grocer," of Cleveland, has his little inventory with him, isn't Between sales of sauerkraut and rye flour Henry kept his mind on other things, and as a result he now announces that he has discovered a simple and inexpensive method of extracting an inexhaustible amount of gas from the atmosphere! There you are, the Spanish electric vehicle is equalled by the American steam and gas engined one! When it comes to working wonders, either actual or alleged, you can depend on the American atmosphere first, last and all the time.

Two horses attached to a carriage took it into their wise heads to promenade on the Twenty-third street sidewalk one day last week. Despite all the coachman and footman could do those noble animais sidewalked, and nought but Providence prevented them killing or injuring a number of the shoppers who thronged the sidewalks. Same day in Fifty-ninth street a woman and her child, in an automobile, were being driven by a professional, not a "millionaire." strange as it may seem, to their home. A woman, through her own or the driver's carelessness, ran into the vehicle, and, while not injured in the least, was, quite naturally, somewhat frightened. Next day the newspapers told the story of the Twenty-third street performance in a couple of inches of their valuable space; the Fifty-ninth street "outrage," however, was awarded scare heads, a column or more of space, riot trimmings and a lot more besides, until you would have thought from all the hullabaloo that it was another Martinique horror. What a difference there is between tweedledee and tweedledum—when you are the editor of a sensation seeking paper!

Some of the manufacturers, or rather some of their agents or self-appointed representatives, are complaining of how they are being imposed upon by a class of people who are ever on the alert to get something for nothing. Because these people, and they are not so very numerous, either, induce the automobile people to give them trial rides and then do not buy the vehicles they ride in. The complainants are in consequence demanding that the practice of giving possible purchasers practical demonstration of an automobile's value be abandoned, or else very much curtailed. If these wailers will accept a bit of advice, which I, who give it, guarantee to be most excellent in quality though small in quantity, they will cease wailing and complain no more. While it may be true that the sellers of automobiles are imposed upon by the purchaser of his imitation, think it over and see if you won't agree with me that in the game of imposition the seller of automobiles really hasn't got any the worst of it. The possible purchaser may lie to the seller, but you need not stay awake at nights mourning over the fact, the seller will not fail to do a little deceiving on his own part. Why, then, should the seller seek to make the game any more one sided than it already is? Goodness knows, the buyer ought to be entitled to something for his money besides trouble, shouldn't he?

To do me justice I do not think any one will accuse me of being on the side of the legislative attacker of the automobile, but I must confess that for once I would support the efforts of this gentleman if he was to propose a law making a working knowledge of the English language obligatory upon any one controlling an automobile. I am any one controlling an automobile. aware that the pride of an American citizen prevents him taking \$90 per month and board and clothes from the owner of an automobiles, because the free American is expected in return therefor to properly care for the vehicle, to run it and to even be properly attired for performing his duties. Thus the owner of an expensive automobile has to import not only the vehicle itself, but the man to care for it as well, Frenchmen apparently not being so squeamish as Americans regarding labor and livery. But even under these conditions I cannot believe that it is right to place a man who knows neither the language nor the customs of the country in charge of one of these big vehicles. would be said of an American railroad which placed men in control of its engines who could neither read nor speak English? So far as the principle is concerned, the automobile and the locomotive in the present instance do not differ.

THE COMMENTATOR.



THE TWO WINNERS

The little Renault voiturette and the powerful Panhard took the honors in the international race from Paris to Vienna.

We have the Renault racer that won the Paris-Berlin race in the voiturette class last year and display Renault voiturettes, tonneaus and racers.

We have arranged for an immediate consignment of Panhards in Paris-Vienna race.

SMITH & MABLEY

513-517 Seventh Avenue, NEW YORK

AMERICAN AGENTS FOR

RENAULT, PANHARD, PEUGEOT, MERCEDES, CHARRON, GIRARDOT & VOIGT

AT THE MOTOR "MART"

At Least, the Catalog Said it was one—Ancient Crocks at a Picturesque Auction.

"Catalogue of Automobiles, to be sold at auction July 1, 1902, at 11 a.m., by the Automobile Mart & Exchange, 97-99 Greenwich street, New York, consisting of Panhards, Darracqs, Charrons, Locomobiles, electrics and other makes, in phaetons, runabouts, victorias, wagons, etc. Terms of sale, 10 per cent deposit required. Balance on delivery."

This was the bait that drew a Motor World man to the above described auction sale. The address given is in the heart of the downtown business' section, and curiosity to know whether the announcement would draw any of the business men of the district, coupled with a desire to get a line on the kind of machines offered, and the prices obtained for them, made it seem worth taking in. And so it proved.

The "mart" itself turned out to be a ramsackle old structure, and had been made "martish" by cutting a door large enough to permit the entrance of a car onto the rickety old floor, the placing of a sign over the door and, of course, a private office in front, in which sat the proprietor, whose nose betrayed his nationality and whose whole manner and appearance fairly exuded "beezness."

On the floor of the loft were grouped what was probably the most nondescript lot of old junk ever seen at one time. The four corners of the earth must have been scoured to secure it. As one spectator remarked, if President Shattuck and the A. C. A. were Loking for curios and relics of the first machines built they could do no better than grab the collection outright. In truth, the lot did resemble the historical relics which comprised the loan exhibit of the A. C. A., and which, it will be remembered, were grouped in the cafe of the Madison Square Garden at the last automobile show.

The lot included just twelve machines in ail, and were as follows: One old 5 horse-power Panhard of the earliest vintage, and even it looked as though it felt its degradation, though it was magnificently listed as having "three levers"!

A Charron victoria, looking like one of the prints from an antique poster, though listed as having originally cost \$5,000, was, with the old Panhard, the sum total of French machines offered.

But the piece de resistance of the whole show was, as the catalogue described it, a top, Magneto battery." It was a Haynes-Aptop, Magneto battery." It was a Hynes-Apperson all right, and was probably the first of that now famous company ever built. From an automobile dealer present it was learned that it had somehow or other got back from Porto Rico, where it was long since sent, to run as a 'bus line, and had been offered at at least four sales to that dealer's own knowledge.

The remainder of the cars were: Two old Locomobiles, ditto one Century, one Victor, one electric hansom cab, an electric runabout and a ponderons looking electric surrey, all three made by the Auto-Dynamic Co., a concern that formerly had a loft in Thirty-eighth street, but which long since "folded its tent, like the Arab, and silently stole away," though, it is feared, not on any of its own machines.

The other two were a Stearns tonneau, and the best looking car in the lot, and a Thomas motor tricycle.

At the advertised hour about twenty men, the lot including at least a half dozen newspaper men and sightseers, were present, and, after waiting half an hour, the auctioneer mounted his box and proceeded to offer No. 1, the above described "Hynes-Apperson." His attempts at describing the machine were ludicrous in the extreme, his opening remark being that every wheel was guaranteed, and this guarantee "catch" he used throughout, though by whom the machines were guaranteed or any other details were not mentioned. In the end the machine was knocked down for \$500, though there were not lacking those who doubted that the sale was a bona fide

The second machine was the electric runabout, which was described as having a "safety cut-out on seat: Machine cannot start until driver is seated," and as there did not seem to be any driver present, able or willing to take a seat and undertake to start the machine, the crowd had to be content with taking the voluble auctioneer's word for its general desirability. This brought\$ 750.

The third was the electric surrey, of which the statement was made that "its upkeep will cost practically nothing during the life of the machine"; certainly some valuable information that has hitherto not been known by the owners of electric machines generally. Despite the declaration that it was made to sell at \$2,500, and that the auctioneer generously consented to entertain a bid of \$1,000 or \$1.20, "just to start the ball rolling," the car brought but \$500.

The fourth machine offered was the Thomas motor tricycle, which, strange to say, brought a higher price, proportionately, than anything yet offered. Originally, it was stated, the list price of this machine was \$350, but as soon as it was seen that there were actually a couple of men present who appeared to be bidding in good faith, the proprietor of the "mart" climbed up beside the auctioneer and said that he thought it cost more than that. This went for \$195.

The fifth, a Locomobile, one of the earliest styles, and which, it was claimed, was made to sell for \$850, brought \$400.

With the sixth, the Charron victoria, the auctioneer was right in his element, and the manner in which he rolled off that the cost

was Five Thousand Dollars was certainly impressive. Sad to relate, however, the rapidly thinning number refused to be impressed, and when The Motor World man left he was vainly endeavoring to get some bid on it at any price. Upon one of the onlookers suggesting to another to bid \$25, the reply was made that the urged one was afraid he might take it, and so declined.

From the character of the few spectators present, and the openly expressed suspicion that several of the "sales" were not "on the level," it hardly seems probable that auction sales of automobiles will prove to be much of a feature in New York City at least.

As Mason Views It

That German manufacturers have made great progress and that there is a splendid opening for American steam cars in Germany are the conclusions drawn by Consul General Mason, of Berlin, in consequence of his visit to the annual Pan-German Motor Carriage Exposition. He says:

"It required but a glance through the rooms to show that the leading German builders have made great progress in automobile construction since 1899. Not only are the carriages in general lighter, more shapely and elegant in outward finish, but they conform more closely in model and relation of parts to modern standards of construction as typified by the leading French machines.

"It is naturally thought that American steam carriages of the runabout type, which are cheap, easily managed and run without smell, noise or unpleasant vibration, will find a ready, appreciative market in Germany. One of these machines was brought to Berlin in the winter of 1901, and attracted much favorable attention.

"But when the new code of automobile regulations went into effect, in April, 1901, a special license became necessary, and it was found that the American locomobile collided at eight points with the Prussian law governing the construction and use of steam boilers. During the past six months, however, a movement has been organized and carried through by which the statute has been amended so as to permit the use of steam carriages which fulfil in their construction certain conditions. With these slight and inexpensive changes the locomobile will be admitted to what is practically a virgin field for steam vehicles."

Now That the War is Over.

A company has recently been formed in Johannesburg for the purpose of organizing a regular service of cars for the conveyance of passengers and the delivery of parcels, etc., in Johannesburg and along the line of reef, and to trade as carriers and cartage contractors. They will also trade as warehousemen in storing and providing accommodation for the cars of private owners, and give instruction to private individuals in the art of driving of cars. The share capital of the company is \$100,000.



FABRICE ON CATALYSIS

Famous Frenchman's Experiments With Ignition Plug of Peculiar Construction.

Catalysis is a term used in chemical physics to denote a force supposed to be exerted by one substance upon another, whereby the latter is subject to decomposition, while the former remains unaltered and uncombined. The effect of hydrocarbon vapor upon spongy platinum, and the advantage taken thereof in the construction of the Deschamp auto-incandescent igniter, has often been described. The impingement of the vapor upon the spongy platinum once heated retains the same at incandescence, and the Deschamps apparatus was designed to embody this.

Dr. Paul Gans de Fabrice, writing to La Locomotion, describes how, after numerous experiments in this direction first entered upon in 1895, he has made an igntion plug in which a spirally-wound length of thin rhodium wire is the material employed for firing the explosive charge. The doctor uses rhodium because its melting point is 2,000 degrees C., and it possesses higher catalytic qualities than any other metal with which he has experimented.

But rhodium is a very difficult metal to work, so that in the end he was fain to content himself with an alloy of platinum and rhodium, which could be drawn into wire. Accordingly, he made an ignition plug which takes the form of an ordinary sparking plug save that the spiral wire of the alloy connects the regulation platinum points between which the electric spark jumps when the mixture within the cylinder of the motor has to be ignited.

When it is desired to start the engine a weak electric current is allowed to pass along the wire and through the alloy spinal earthing. In so doing it heats the alloy spiral to incandescence, and this incandescence, once obtained, the same is thereafter retained by the impingement thereon of the gasolene vapor drawn fresh into the cylinder and compressed into the small igniting chamber by the charging and compressing motions of the piston.

Or the motor can be initially started by the electric spark alone, the current being cut off as soon as the alloy spiral is sufficiently heated by the explosion of the mixture. This takes about one minute. The firing moment is determined by the volume of the igniting chamber, so it would appear that with this system of ignition it is not possible to advance or retard the firing of the explosive mixture in the usual way.

In the description referred to Dr. Fabrice intimates that he has had a similar apparatus in successful use on one of his cars for the past four years and that since it has been fitted it has given him no trouble. He states that the faster the engine runs the hotter grows the alloy spiral, and that the ad-

The Motor Morid.

vance or retarding of the ignition can be controlled by the amount of mixture allowed to pass to the cylinder. By this it would appear that the throttle valve lever would in such case be also the ignition lever. The greater the compression the earlier the firing though it would seem that with ordinary ignition tubes the same effects should obtain.

Calculation of Horse Power.

. On the last day of the Automobile Congress at Dijon, France, Count Chasseloup-Loubat read an interesting paper devoted to the question of the calculation of the horse-power of explosion engines, and this in connection with the taxation of motor cars.

The question which the Count specially brought before the Congress for discussion was whether the horse-power taxed should be calculated as from the fly-wheel of the motor or as from the road wheels, and it was pointed out by the Count that it would be much more reasonable to base the taxation on the horse-power developed by the motor, for in this case encouragement would be given to the constructor who obtained the best result, whereas in the method at present adopted, out of two cars giving off five horse-power on the road wheels, one may be taxed for a 12-h. p. engine and the other for a 7-h. p.

With regard to the measurement of the horse-power of explosion engines, the Count pointed out that cylinder measurements are absolutely fictitious for the following reasons: (1) More or less speed can be got out of similar engines according to the weight of the valves, or the springs which work the valves, by varying the length of the piston, and by varying the cooling surface of the explosion; (2) by varying the compression; (3) by varying the carburation; (4) by varying the rapidity with which the exhaust gases are got rid of; (5) by more or less expansion; (6) by more or less rapid cooling of the cylinder; (7) by varying the ignition; and (8) by varying the weight of the fly-wheel.

Mail Deliveries in Porto Rico.

To the Automobile Transportation Co., of Porto Rico, has been awarded the contract for carrying the mail between San Juan and Ponce. The company has five wagons in constant service, and as the operators have acquired close familiarity with the roads they are able to make very fast time with safety. Several tests were given, showing that close schedule could be kept. Two trips will be made daily, the night run to be made in ten hours and the day run in nine hours. Should the mail arrive late, the Postal Department will impose fines, unless the delay is the result of unavoidable troubles. The company has deposited a \$15,000 bond, which may be forfeited in case the contract is not lived up to.

An ordinance is before the Omaha (Neb.) councils fixing the maximum speed of automobiles at the very sensible rate of twelve miles an hour.

PROPERTIES OF PETROLEUM

How its Products Differ and Have Many Widely Varying Names.

The term gasolene is a little indefinite when used by the trade. Technically it is the heaviest of the three petroleum ethers, its chief chemical constituent being pentane, C5H12, and is one of the lightest hydrocarbons produced by the distillation of petroleum.

What is known in this country as "stove gasolene" is technically known as the lightest of the three petroleum spirits which are distilled from crude petroleum after the petroleum ethers have been driven off and the temperature of the still increased. It is also technically known as "C naphtha" and as "benzine naphtha."

The following list is given on the authority of Mr. Boverton Redwood, and is quoted from his book on "Petroleum:"

	Specific	Beaumé's
	Gravity.	Hydrometer
Petroleum Ether Cymogene	.69	108
Rhigolene	.62563	1 94-92
Gasolene	.63566	8 9080
Petro'm Spirit C-Naphtha,		
Benzine, Naphtha	.68270	2 76-70
B-Naphtha	.71672	0 6665
A—Naphtha Benzine	e.743—.74°	7 5958
Kerosene, American	.78280	0 49-45
Russian	.822—.830	0 4 0—38

Gasolene of the American trade is commercially known as "stove gasolene," and is "74 degrees Beaumé gasolene," although much of it runs to 70 degrees, or even to 68 degrees B.

Benzine, as will be perceived fro mthe above list, is "A-naphtha," and is sometimes divided into two grades, the heavier being from 58 degrees to 59 degrees B., and the lighter from 62 degrees to 65 degrees B. Benzolene is the same as benzine.

Petrole is the French name for petroleum. Petrol is the French name for a certain hydrocarbon, which is obtained near Hanover, but whose use does not enter into the gas engine industry.

The New York Petroleum Exchange defines petroleum spirit as "naphtha shall be water-white and sweet and of gravity from 68 degrees to 73 degrees B. Petroleum spirit is already defined, its specific gravity being between .679 and .1. There seem to be great objections to the use or handling of gasolene in foreign countries, hence difficulty is experienced in buying it.

Petrol, when used as an English word, usually signifies the same product of the distillation of petroleum as in this country is known as "benzine naphtha" or "stove gasolene," being a lighter hydrocarbon than kerosene, of an average density of .68. It gives off an inflammable vapor at any temperature above the freezing point. Much of it as found in England, is lighter and more inflammable than the gasolene used for similar purposes in this country.



SPLITS SASSIETY

Does the Automobile in Newport—First Gun is Fired by its Opponents.

If appearances go for anything Newport, R. I., is to witness a repetition of the automobile war which raged in the queen of watering places last year. It will be recalled that "society" was divided into two hostile camps, one intensely pro-automobile, the other bitterly opposed to the aggressions of the motor vehicle. The matter culminated when the speed trials on the Ocean Drive were about to be run in August. The autophobes succeeded in having the races forbidden by the city authorities, and forced their opponents to run them on a trotting track.

This year the fight is on. Notwithstanding the absence of "Willie K." Vanderbilt, Foxhall Keene, D. W. Bishop and other votaries of the speed cult, complaints of fast driving are still made. Consequently the antis have taken early action. Last week they sent the following letter to the local chief of police:

"Sir: The undersigned, citizens and residents of Newport, beg to call your attention to the discomforth, annoyances and danger to life which this community suffered last summer from the reckless and illegal manner in which automobiles were driven over the public highways of the city. The general laws of the State and the local ordinances will, if properly enforced, compel automobiles to comply with the rules of the road. We therefore respectfully request you, as chief of the police department, to see that laws in reference to travel on the highways are strictly enforced by night as well as by day, to secure to the public the full exercise of their rights."

To this letter an impressive list of names was signed, as will be seen:

A. Agassiz, H. A. C. Taylor, Theo. M. Davis, Sidney Webster, Frederic Sheldon, Theo. K. Gibbs, Arthur B. Emmons, Addison Thomas, P. H. Powel, J. R. Drexel, J. Fred Pierson, E. M. Neill, H. C. DeRham, Paul A. Andrews, F. P. Garretson, J. Mc-Pherson Creighton, John S. Tooker, Walcott Bibbs, Arnold Hague, S. E. Huntington, G. M. Hutton, Hugh D. Auchincloss, William Grosvenor. George Gordon King, Thomas Janney, Louis L. Lorillard, Elisha Dyer, Jr., Louis Q. Jones, R. King, Edward J. Berwind, Stephen S. Burt, William Watts Sherman, Daniel B. Fearing.

Immediate attention was given to the letter, Chief Richards replying:

"I hereby acknowledge the receipt of a communication, signed by yourself and 32 other gentlemen, representating business men, summer residents and representative citizens of the city, in relation to the reckless and illegal manner in which automobiles were driven over the highways of this city last summer, and requesting the strict enforcement of the laws in this respect, by day

as well as by night, that the public may have the full exercise of their rights.

"In reply thereto, I wish to assure you and your associates, and all other persons that the fullest attention possible will be given to this matter, and the members of this department will receive orders and be instructed to report all violations of the statue law and city ordinances in regard to this subject, and in all cases where the evidence is sufficient to convict the person so offending will be prosecuted and proceedings will be instituted by me to this effect.

"Trusting that this course is satisfactory to you all, as it is consistent with the performance of my duties, I am, etc."

CHIEF OF POLICE.

Want Traffic Regulated.

At a meeting of the Milwaukee Automobile Club held last week, it was decided to ask the city council to pass an ordinance to regulate the running of vehicles in the downtown districts, which should apply to cyclists and drivers of horses as well as to automobilists. The members did not favor the plan to license chauffeurs, holding that many of the most expert in the management of vehicles of this kind have no technical knowledge of automobiles whatever. The following committees were appointed.

On Legislation—W. H. Starkweather, E. W. Olds, R. C. Forrer.

On Racing—Thomas Jones, A. E. Wait, Charles L. Haase, Jr., G. L. Odenbrett and N. C. Norton.

Eight new members joined the club, namely, W. H. Starkweather, Dr. Williamson, E. W. Olds, Joseph Fehrer, Charles Milzer, John L. Kunz and George L. Odenbrett.

The next meeting of the club will be held on the last Thursday in July.

For Hackensack's Guidance.

Among the provisions of an automobile ordinance which is to be brought up in Hackensack, N. J., are the following:

The speed limit will be placed at eight miles an hour, and the ordinance will include a clause stating that an automobile shall have passed twenty-five feet beyond another vehicle before turning in front of that vehicle; that any vehicle propelled by other than human or animal power, if requested to stop, or if cautioned by some sign to go slow, shall do so. Further, that in case of any accident both parties to such accident shall stop and exchange names and addresses, and that all vehicles propelled by mechanical power shall display the initials of the owner in a conspicuous place. The fine for driving faster than eight miles an hour is recommended to be \$50 for the first offence and \$100 or imprisonment for four months, or both, for the second.

H. A. Spiller, of Boston, has had turned out of the Shields Carriage Co.'s factory at Amesbury, Mass., a double cylinder 10 horsepower gasolene automobile.

HIS PLIANT

Just Because he is an Automobilist his Mishaps Please Onlookers.

"Do I look like a baby killer?" asked the automobilist in aggrieved tones. "Do I hesemble a man whose chief delight is to hear the bones of victims crunching under the wheels of my machine?"

To tell the truth he did not, says the Press, which tells the story. He seemed more like a clean, hearty, young fellow, fond of athletics and capable of getting a good deal of honest enjoyment out of life.

"I never killed a child in my life," he continued warmly, "yet from the attitude of the general public it is my chief amusement. Horses have killed men, women and children, yet there is none of the general feeling of hostility toward the driver of fast horses that there is toward the automobilist. Of course, in a way, the automobilists themselves are partly responsible for this. There are foolish and reckless ones, just as there are reckless drivers, or for that matter reckless and criminal pedestrians. But it is as unfair to blame us all for the actions of individuals as it would be to say that because one yachtsman or horseman was careless of the rights of others that the whole class should be blamed.

"This feeling on the part of a section of the public is shown not only in overt acts of hostility like the attack on the Thomas automobile a few days ago, but in a thousand different little ways. The other day I was running up Broadway, when the machine broke down. Of course, a crowd gathered; that would have happened if a cab or a coal wagon had broken down. But the attitude of the crowd was entirely different.

"It wasn't simply interest or curiosity. It was a sort of malicious enjoyment at the thought that an automobilist had come to grief. Not a person offered us the least help in pushing the heavy machine off the cable car tracks. In fact, most of the spectators seemed to hope that we would be run down or at least unable to move the auto. They laughed and jeered at our strenuous efforts, and when I finally got the machine started up again, actually a little sigh of disappointment arose.

"Yet we had been running at a moderate pace, taking care not to interfere with or run down any one. It wasn't any personal hostility to me, for if I had been hurt myself while doing anything but run an auto a dozen persons would have been ready to help me.

"Automobiling is just as good and clean a sport as golf, baseball or yachting. Most of us are careful of the rights of others. But on account of the recklessness of a few the public has put us all under a ban. It's mighty unfair."



THE PARIS=VIENNA RACE

WAS A

CONTINUOUS TRAIL OF DISABLED TIRES.

FOURNIER, GIRARDOT.

W. K. VANDERBILT, Jr., FOXHALL KEENE,

and others of the big men were put out, when

MUNGER TIRES

WOULD HAVE SAVED THEM

FROM THE IGNOMINY OF BEING NUMBERED AMONG THE ALSO RANS.



ALMOST IMPOSSIBLE TO PUNCTURE. IF THEY DO, YOU GET THERE, ANYWAY.

The application of a little common sense and MUNGER TIRES saves much trouble.

Munger Automobile Tire Co.,

TRENTON, NEW JERSEY.

POPULAR PASTIME

Is Mobbing Automobilists Becoming—Woman and Child Have Narrow Escape.

Another attack on a defenceless woman and child, the occupants of an automobile, this time by full grown roughs, has taken place in this city. But for the timely appearance of some members of the New-York Athletic Club, near where the assault took place, they would have suffered severe injuries.

It appears that a daughter of Justice Roger A. Pryor, with her little girl, were going up Seventh-ave. in an automobile belonging to Spencer Trask, the banker. Nearing Fifty-eighth-st, a woman in the crowd that always congregates at this street railway junction stepped in front of the vehicle, and before it could be stopped she was knocked down. The chauffeur instantly stopped, but without waiting to see if the woman was hurt the crowd of roughs, said to have been made up largely of Poles, started for the vehicle.

They did not molest the man. He could hit back, consequently he was to be avoided. In the open carriage, however, were the woman and her child, and toward them the men ran. What followed is thus described by The Tribune, which has been one of the most rabid autophobes of the metropolitan press:

"At the end of a minute the driver, who is James Cush, of No. 529 West Fifty-first street, was on the ground, with a mob surrounding him. The woman was leaning back in her seat, frightened and pale, and holding the little girl, who was terrified.

"Mrs. Stauf had been thrown down by the automobile, and forced along the asphalt pavement several feet. Her head had been cut, her body bruised and her clothing torm and soiled. She looked lifeless. Shrieks of horror and cries of sympathy went up from the people who saw the accident. The crowd that moved toward the automobile contained many well dressed men and women.

"'Get that woman out; we want her. Get her out of the machine!' shouted some of the people as they surrounded the woman, child and driver. 'Who is that woman?' demanded a man in the front of the crowd, while two other men beside him made the same demand.

"The driver, although the crowd howled, refused to tell who owned the machine, or who the woman was.

"Pull her out and find out who she is! shouted some in the rear, and they pressed the others in front of them forward.

"'What right have you to know who she is?' asked the driver.

"The woman was white and clinging to the seat, and the girl was crying. Just then club members and cabinen pushed through the crowd, which was crying, 'Get her out and get her name!'

"The clubmen and cabmen pushed the

crowd aside and took the woman and child out. They led them quickly through the crowd and into the clubhouse. The driver was left behind."

Will be a Figure in the Trade.

It is not often that a concern begins business under such happy auspices as fell to the lot of the Northern Mfg. Co., Detroit, Mich. Capital in plenty, business ability of no mean order and a mechanical staff that left nothing to be desired—these formed a combination not easily excelled.

The Northern Co.'s car, which is herewith illustrated, is a thoroughly good looker, and, what is even more to the point, is as good as it looks. It is a gasolene car of the runabout type, the propelling power being

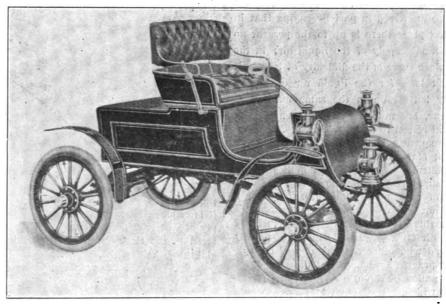
In the Diamond State.

The recently formed Diamond Automobile Co. was organized last week at Wilmington, Del. The officers chosen were: President, James Baily; secretary and treasurer, Joseph H. Baily, jr.

The company proposes to build, store, care for and deliver automobiles.

The company has perfected a new design of automobile embodying many exclusive features. It will be simple in construction, with few parts and no clutches or chains, and will be much cheaper than any motor vehicle on the market.

Operations will be commenced by the firm at once, but it will be a few months before automobiles are turned out of the plant and put on the market.



NORTHERN MANUFACTURING COMPANY'S RUNABOUT.

furnished by a single cylinder horizontal m tor developing 5 horsepower. The Motor World man can bear testimany to the "sweet" and noiseless running of the car, its ample power, and freedom from the excessive vibration noticed in some cars of no greater power. Altogether the vehicle is one that can scarcely fail to attract attention and cut no mean figure in the trade.

Recent Incorporations.

Jersey City, N. J.—Thomas Wright Co., with \$200,000 capital, to manufacture automobiles and wagons. Incorporators, Thomas Wright, Thomas E. Wright, John F. Wright and Joseph M. Adams.

Trenton, N. J.—The Interstate Ball Bearing Co., with \$1,000,000 capital, to manufacture steel balls and ball bearings. Incorporators, Francis ... G. Maack, L. C. S. Killian, of New York, and George White, jr., of Madison, N. J.

Jersey City, N. J.—Timken Roller Bearing Axle Co., with \$200,000 capital stock. Incorporators, H. H. Timken, W. R. Timken, L. M. Preston and Charles Hardenberg.

Steam Vehicle Co. a Bankrupt.

No defense being offered to the petition, the Steam Vehicle Co. of America was last week adjudged a bankrupt by the United States Circuit Court at Philadelphia.

Referring to the matter, President Schwarzenbach of the company informed a Motor World man that he had not yet been served with papers, and could give no figures regarding the company's affairs. He confirmed the statement that it had been adjudged a bankrupt, however.

The Week's Exports.

Antwerp—Two cases auto machines, \$100. Argentine Republic—Four cases motor parts, \$332.

Havre—One case motor vehicle parts. \$10,000,

London—Twenty-eight cases motor vehicles and parts, \$12,472.

Philippine Islands—One case auto parts,

Preferred Stockholders get Dividend.

The Locomobile Co., of America, on Monday declared a semi-annual dividend of $3\ell_2$ per cent. on its preferred stock.



IT'S FASCINATING

In Theory, but in Practice Liquid Air has Little Change of Success.

No one who watched the Tripler liquid air motor vehicle shown at the Grand Central Palace, this city, in 1900 could fail to be faccinated with it—in theory. No boiler, no fire, no fumes, no ignition, no danger!—nothing but a tiny steam engine of quite ordinary construction and the tank containing the liquid air, with the necessary valves and taps for admission and control

In face of this the question may well be asked, what prevents the actual utilisation of such a wonderful power? This question may be answered in part by saying that in the first place there is up to the present no commercial supply of the liquid air; in the next place there is the difficulty of transport without loss, for the liquid air cannot be tightly bottled up in the same manner as gasolene, but must be allowed vent for its gradual return to the gaseous state.

Consequently it will be seen that in the present state of development, there is still the difficulty of renewing supplies away from supply towns, or the alternative difficulty of carrying a sufficient supply for a long tour.

Still this objection to the employment of liquid air on a large scale may be speedily removed when once the economy of the system is practically demonstrated.

One gallon of liquid air placed in an ordinary wide-mouthed bottle takes twenty bours to evaporate when the bottle neck is left open; at any intermediate period, if this liquid be confined as in a closed tank communicating with an engine cylinder, pressure will form according to the extent of heating or evaporating effect of the outer atmosphere, but the liquid remaining as such has always the same value, and does not in any way deterioate from exposure.

In practice the liquid is contained in a double-skinned tank, the division between the inner and the outer tank being a vacuum, so as to prevent the too rapid return of the liquid to the gaseous state. Rapid expansion of gases or rapid evaporation is well known to produce a rapid fall in temperature, and liquid air if allowed to fume from an openmouthed bottle or other vessel quickly deposits a snowy crust around the outlet, but it is stated that when enclosed and under control in the steam engine system there is no tendency to formation of ice in the cylinder or valves of the engine.

Most people of any scientific turn of mind are already aware of the methods of production and some of the properties of liquid air, but to describe it in a few words it may be said that the temperature of the normal atmosphere is as much above that of liquid air as is the furnace of the steam boiler above the cold water from which steam is to be produced.

Many gases may be rendered liquid by prolonged and severe compression, and this latest discovery of the liquefying of the common atmospheric air takes place at 312 degrees below zero, so that heat and steam are first employed to effect this degree of compression, and the power is returned by expansion as the liquid returns more or less rapidly to its gaseous state according to the facility given it to absorb the heat from the surrounding atmosphere.

Truth Seen in its Rear.

No one who looked at the front of the new Sepollet racing car would take it to be driven by steam. The huge, box-like bonnet suggests the gasolene type most strongly, and it



is only upon an examination of the rear of the car that the truth is known. In this case the bonnet is not for ornament alone. Under it is concealed a large reservoir for the supply of water. This car was one of those entered in the Paris-Vienna race, making the eighth of the Serpollet make.

For Ambulatory Vacations.

The houseboat is the most desirable vehicle so far devised for an ambulatory vacation. But the automobile must be much cheaper than the houseboat, and it will enable its owners to move through mountain regions that they can traverse in no other way so comfortably and so cheaply. Driving through the mountains has long been held to be an ideal way to enjoy a vacation. But for a party of four, which might easily travel in a machine wagon, a driving trip involves the hire of two horses and the feeding of the horses and the party at the wayside hotels. The cost is at least commensurate with the enjoyment, and puts driving parties out of the reach of people of moderate means. But after the first cost of an automobile the expenses of the migratory camping party on it would be comparatively slight; less than board in even a mountain farmheuse, where one is tied down to a repetition not only of the same things for dinner and breakfast, but the same views at night and morning. The vacation automobile promises to fill a long felt want. If the gypsies hasten its coming they will have done at least one good deed in a naughty world. They need the credit for that as, badly as vacation seekers need the house automobile.-(Brooklyn Eagle.

WHYS AND WHEREFORES

Of Governing—Throttling the Admission is Now the Favorite Method.

"Now that the governing of the throttle, or, in other words, automatically cutting off the quantity of explosive vapor to the engine as its speed of rotation increases above the normal rate of revolution at which the governor is set, has become recognized as the right end of the engine to place the control, people are asking how it is that governing on the exhaust should have been in use for so long a period when anyone with the least acquaintance with steam practice would have begun at the hrottle or admission end of the engine," says a contemporary.

"This is not an unnatural question to ask, and it one to which a number of answers may be offered.

"In the first place, there is no doubt that for some considerable time the exhaust governing has merely been continued because the pioneer houses used it, and it was not until they broke away from the practice that others came forward with their devices.

"This. however, is but half the answer to the question, and we are still faced with the query as to why Herr Daimler should have governed his engine by keeping the exhaust valve closed when the speed exceeded the predetermined rate of revolution, and wby he did not either cut off his inlet entirely and so miss explosions, or, still better, gradunte his charge, so that the force of the explosion was reduced instead of missed, it being obviously much better that the strength of the impulse should be varied according to the requirement rather than that the impulse should be always of equal power, but missed altogether when the engine was running faster than required.

"We believe the generally accepted explanation of Herr Daimler's practice was the desire to procure silence of running, as the closing of the exhaust certainly resulted in this, particularly in the tarly engines, before the niceties of construction were as well understood as they are to-day. There was also a possibility-though we scarcely think it was this which affected the matter-of unwillingness to in any way interfere with the supply end of the engine, as so much difficulty had been experienced before obtaing the right mixture and proper carburation, It may be that the early workers felt it better to leave well enough alone, and to put their governor control at the less sensitive end of

"Of course, apart from fuel economy, the great advantages of the throttle control are simplicity and the quietness of running which it secures."

Automobile Their Deadly Enemy.

More than a year ago it was pointed out in these columns that Nemesis in the shape of the horseless vehicle was about to overtake that omnipresent and thoroughly disliked bird, the English sparrow. Events since then have but made the prediction a more certain one, the rapid increase in the number of automobiles being accompanied by a considerable lessening in the number of horse drawn vehicles in use.

The matter has attracted the attention of Professor Frank M. Chapman, ornithologist of the American Museum of Natural History, who says that the result of the general use in the city, for business as well as for pleasure purposes, of automobiles will be the disappearance, in considerable measure at least, of the English or house sparrows now so common here.

These birds, which are to be met with in every street, to be seen on elevated railroad stations, on wharves and hopping about on the decks and on the furled sails of vessels alongside of wharves—which are to be seen, in fact, everywhere, in search of food—will eat anything. Their greatest single source of food supply is found in the street sweepings.

Now, as horses disappear, the streets become cleaner. This has been seen in some degree already in the substitution of electric cars for cars drawn by horses.

With the introduction within comparatively recent years of improved street pavements, with better and prompter methods of street cleaning, the food supply of sparrows has diminished, and there are probably not quite so many sparrows here now as there were a few years ago. But there are millions of them still, which are now threatened, indirectly but none the less certainly, by the automobile.

Wants a Bureau Anyway.

Although automobiles are a rarity in New Orleans, it is the opinion of the Hon. A. Trigg Moss, of that city, that an automobile bureau is badly needed.

So firmly is Mr. Moss impressed with the idea that automobiles require more than police supervision that he intends to introduce at the next meeting of the City Council an ordinance to make provision for an automobile bureau at the City Hall.

The proposed ordinance of Mr. Moss is very voluminous, and provides for a board of examiners, a board, a secretary, pains and penalties, etc. In fact, Mr. Moss's proposed ordinance is as far reaching as one would be required to be if New Orleans were an automobile city, instead of being, as it is, one where automobiles are few and far between and not likely to come into general vogue, as the streets of the city and its environs render automobile driving impracticable.

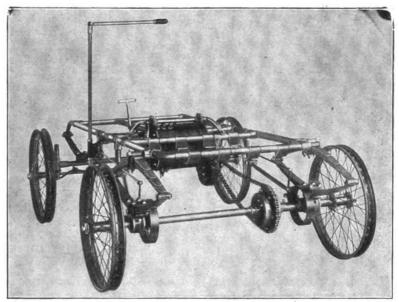
The Stringer Automobile Co., of Marion, Ohio, have completed a steam automobile, and will probably make more of them.

HERCULES RUNNING GEARS

EOR ELECTRIC AND GASOLENE VEHICLES

There are no weak spots in these gears.

Don't confound them with gears which have been hastily constructed to meet an early demand from automobile makers.



ELECTRIC VEHICLE GEAR WITH MOTOR IN POSITION

We also solicit orders for parts of these gears. Their design is original and the construction is sound. Prices and particulars of construction sent upon application.

THE AUTOMOBILE AND CYCLE PARTS COMPANY SMITH STAMPINGS FACTORY

Milwaukee & Wisconsin

Track at Brighton Will be Fast.

The committee having in charge the race meet of the Long Island Automobile Club, scheduled for Aug. 23, at Brighton Beach, N. Y., are determined that the contesting vehicles shall have nothing to complain of in the way of a track. The one at Brighton Beach is without any dobt one of the speediest for the purpose in the country. It is 80 feet wide and banked to a degree equalled by none. The bed is hard, and consequently is easily put and more easily kept in prime condition than any in the metropolitan district. The fact that the track is to be used for a whole week's trotting meet, demonstrates its capabilities and desirabilities.

For days before the event a 20-ton steam roller will be in almost constant use, preparing the surface.

The arrangements of the club contemplate the use of the grand stands, clubhouse, paddock, etc. A complete machine shop in charge of experts will be established for use on the day of the races, for the convenience of competite, who may go to the track by motor. Accommodations looking toward the most satisfactory care of cars are being made; these contemplate either checking or taking positions for observance of start and finish.

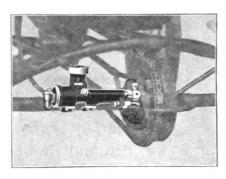
It is Automatic.

One of the strongest features of the "Reason" air pump, manufactured by the Reason Automatic Air Pump Co., Detroit, Mich., is that it is entirely automatic in its operation.

It can be set by a simple adjustment to

automatically lock and unlock on any predetermined pressures from 5 to 80 pounds, as desired by the operator, the variation between the locking and unlocking points can be regulated at from 5 to 20 pounds, thus maintaining a reliable uniform pressure between the two points of adjustment.

The capacity of the pump is from 40 to 50 pounds of air in from three to five minutes, the pump being in operation only a small



portion of the time the vehicle is running to keep up the desired pressure.

The new model pump is attached to the rear axle of the vehicle with clips, as shown in the cut, and by a simple device accurately adjusted and firmly secured to the axle yoke around the compensating gear, and is operated by a cam disk, the face of which is bolted to the sprocket, which makes a suitable cover for the compensating gear. It can be easily and securely attached to

It can be easily and securely attached to any vehicle in a few minutes, and is absolutely positive in its operation, and requires no attention whatever except occasional oiling, all wearing parts being properly protected from dirt or dust.



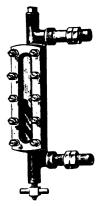
The only gauge glass made for automobile use which does not explode. No lamps and no extra glasses needed.

needed.

We have a large supply of these gauges in stock.

LOCKE REGULATOR CO.,

Send for Catalogue "C."



•---THE---•

MERIAM CHARGING PLANTS

ARE MADE IN FOUR DIFFERENT SIZES.

They are adapted for recharging the batteries of

Electric Automobiles, Electric Launches,

and for Isolated Lighting Plants.

Write for particulars and prices to

The MERIAM-ABBOTT CO.,

60 East Prospect St.,

CLEVELAND, O.

@~~FRENCH AND AMERICAN~~® 10-H.P. Agents for **AUTOMOBILES.** NEW THE **ELECTRIC** 4 Gylinder Front. Peugeot-Mors-Cottereau. VEHICLE CO. **BLUE RIBBON** WINNER Long Island Endurance Test. The Central Automobile Co. **1684 Broadway** 8-H. P. MORS **Prompt Deliveries of** OPEN DAY AND NIGHT. **Prompt Deliveries of** 10-H. P. COTTEREAU 5 AND 10 H. P. **AND ELECTRIC VEHICLE** LARGEST AND BEST EQUIPPED AUTOMOBILE DEPOT PEUCEOT, **COMPANY'8** IN THE UNITED STATES. 8 AND 15 H. P. **ELECTRICS.** ALL KINDS OF FRENCH AUTOMOBILE PARTS KEPT IN STOCK. MORS.

ELECTRICS CHARGED AND KEPT IN FIRST-CLASS ORDER.

MAKES MEHCANICIANS

Does This English Training School—What Auto-Coachman Should be.

"The Automobile Club is projecting an excellent work in proposing to train men to serve as gentlemen's servants in the capacity of motor-coachman," says an English contemporary.

"At present the utmost difficulty is experienced in obtaining really capable drivers. Λ few there are who, in the matters of manner and efficiency, leave nothing to be desired. But for the most part the mechanician of the autocar is a pale and silent, somewhat youthful person, of shy and diffident bearing, attired in a garb which may be described as a compromise between the Sunday best of a superior artisan and the uniform of a ship's steward. He betrays much sensitiveness, perhaps a little soreness, on the subject of his position. One might, indeed, suppose him to be somewhat on the defensive lest he be mistaken for a servant. This surely is an error on his part. His employer is, according to recognized rules, his superior officer. The King is, perhaps, the only unit of society who owns none such. Each one of us lesser mortals possesses a superior officer, and we do not add to our importance by attempting to ignore the fact.

"The motor-coachman is doubtless a superior order of coachman, the mechanism of the autocar demanding for its proper understanding and skilful control more brain effort and resource than are required by horses. But if he would add to his superior coachmanship the smart bearing and civil decision of the ordinary coachman, his importance and dignity would gain—not suffer.

"As regards efficiency, or lack of it, the men themselves are not to blame for their shortcomings, seeing that hitherto they have been compelled to earn their knowledge in a haphazard, wholly unsystematic fashion. A bit of information acquired here, a spell of practice obtained there, experience with one make of car, and before the system of this has been fully grasped, a change over to another variety, has been in most cases all that they have been able to get in the way of instruction.

"The new projected training school would change all this. Combined with a technical knowledge of the general principles of each variety of autocar, they would get a practical acquaintance with their working. The men would be trained, and their capacity tested in the arts both of driving and of comprehending in every particular the automobile mechanism. At present drivers of motors form two distinct classes—those who know something of motor mechanism and but little of driving, and those who know something about driving and but little of mechanism. They are drafted usually from the workshops. They have spent months or

years in some or another branch of the motor industry, and if perfectly understanding their one especial branch of motor construction they are but imperfectly acquainted with the motor mechanism as a whole.

"Moreover, employment in engineering shops does not qualify for driving. A good ecachman must know something of roads and of routes, must be ready of resource in emergency, able to keep a cool head and a steady hand, and, moreover, should possess some measure of sporting outdoor instinct, whether horse or steam or petrol be his motive power. Some men from engineering workshops, properly trained, make admirable coachmen; others no training whatsoever will fit for the vocation. The workshop training is an excellent basis, acquainting one with the requisite knowledge of mechanical construction, but one may be a capable engineer and yet incapable of the art of driving.

"The training school projected by the club will recruit its ranks mainly from two classes-men who perhaps have driven all their lives, but have driven horses, and, wishing to be up to date, propose to learn the automobile mechanism in order that they may add the latest art of coachmanship to their repertory; men who are more or less acquainted with the automobile mechanism. but, knowing nothing of coachmanship, propose to supplement their engineering knowledge with experience and skill in driving. Of these two classes some mechanicians will be shown to be hopeless as drivers, some coachmen will prove themselves wholly incapable of understanding and controlling the mechanism of an autocar.

"The training school will provide us with a class of men who will combine mechanical knowledge with experience and skill in driving, men who are not merely mechanicians or merely coachmen, but who may well be described by the term auto-coachmen, a term we now coin for the occasion and present with much pleasure to the club and its new pupils."

Though Sleeping Car Line to Grand Rapids, Mich.

A Pullman Sleeping Car of latest construction is now attached to New York Central train leaving Grand Central Station at 4:00 p. m., daily, running through over the Michigan Central Station, arriving at Grand Rapids at 12:55 p. m., next day, connecting in Union Station for all points in Western Michigan. For information and sleeping car reservations inquire of New York Central Agents.

Air and Water Pumps.

THE UNION STEAM PUMP CO., BATTLE CREEK, MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.

HIGH DUTY STEEL BALLS

ACCURATE TO 1-10000 OF AN INCH



AUTOMOBILES

WE MAKE OVER 500,000

BALLS EACH DAY

THE AUTOMOBILE

CYCLE PARTS

COMPANY

Ball and Pedal Factory

CLEVELAND, OHIO.

FOR FIGHTING FIRE

British Self Propelled Engine Burns Kerosene— Is Light and Inexpensive.

Light of weight, of low first cost and comparatively inexpensive in point of maintenance cost, yet thoroughly reliable and efficient—these are the claims which the British manufacturers of a self-propelled fire engine make for their latest type of vehicle.

Appropriately named the Fire King, the machine differs in many respects from the ordinary fire department engine. The main features are an attainable speed of thirty miles an hour and almost instantaneous readiness. The use of liquid fuel gives it an

roller chain being provided for this purpose. The pumps are capable of delivering 300 gallons per minute, and throwing a jet to a height of 150 feet.

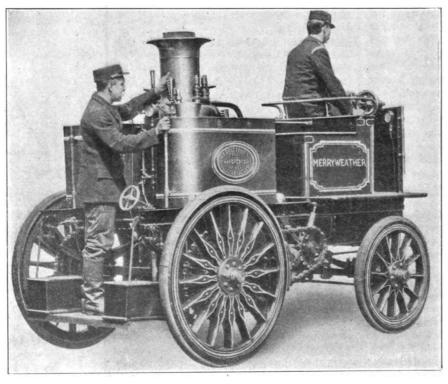
The steering wheel, steam regulating lever, reversing lever and brake are all within easy reach of a man sitting on the off side on the front, and an auxiliary brake is provided to work with a screw and hand wheel at the back. The machine is arranged to carry the usual complement of firemen, hose and gear, and the entire weight, when fully equipped with fuel, coal, water and the firemen, is under three tons.

Upon arriving at a fire the propelling mechanism can at once be thrown out of gear, the pump coupled up by a quick hitching device to the steam piston rods. The vehicle is under perfect control, and can be

Uses of Graphite.

The virtues of graphite as a lubricant are hardly as much appreciated as they might be. True, it is dirty and somewhat difficult to distribute, being, when mixed with oil, not altogether an ideal liquid for drip lubricators; but in such cases as a piston or bearing slightly injured through insufficient lubrication, a short course of graphite will often get the surfaces back into good working condition—a fact worth noting, particularly with steam cars.

For valve stems, too, graphite is useful, being, indeed, the only admissible lubricaut, and it is equally beneficial to that bugbear, the pump. It is somewhat odd, by the way, that lignum vitæ bearings have not been employed in the latter, being the only material on which metal will run with water



enormous advantage over the ordinary coal consumer, which is a source of danger in itself, emitting as it does great showers of sparks while at work. Petroleum is carried in two copper cylinders, each holding fifteen gallons, sufficient to take the vehicle a distance of some thirty miles. The engine is of 30 horsepower, fitted with the Clarkson burner. With the use of liquid fuel and a cunningly contrived vaporizer, water can be kept warm, and half a minute after an alarm the horseless engine may be dashing toward the fire. A few seconds may mean the safety of valuable lives and property.

An arrangement of spur gearing enables the engine to drive an intermediate shaft when put out of gear with the fire pumps. This counter shaft is fitted with balance gear, and drives the rear wheels by means of strong roller chains. The steering is effected by means of a hand wheel actuating a vertical shaft which is connected to the fore carriage, a small sprocket wheel and

pulled up within four or five yards when travelling at full speed. The self-propelled fire engine is neither exorbitantly priced nor expensive to maintain. Roughly, the Fire King is offered for \$4,000, and the subsequent cost is much less than the upkeep of stables and the existing pattern of engine.

Must Find the Ladies.

Expert handling of their cars is demanded of contestants in a novel ecent which is to be run by a British club. It is called a Ladies' Passenger Race, and requires the entrants to drive 100 yards, alight, assist a lady from her chair to the front seat of the car, drive a further 100 yards, pick up another fair fare, and still another lady 100 yards further on, shut the tonneau securely, mount and drive to the finish, all at express engine rate. Ladies must not rise from their chairs until the car driver ceremonlously offers his hand to assist them. The programme dryly remarks, "Owners to find the ladies."

lubrication. Graphite for such purposes should, it is needless to say, be of the best, the ordinary blackleads, though good enough for smearing packings with to prevent adhesion, being by no means suitable for anything else except blacking stoves.

Finally, for such small moving parts as are not deemed worthy of special oiling devices, and usually have to depend on a casual—sometimes very casual—oil can, a grease syringe, best employed with some graphite grease, is far preferable.

Some Striking Contrasts.

For his good work in bringing Reina, the famous running horse, to the front Albert Featherstone, the millionaire bicycle manufacturer, is credited with having presented Jockey O'Conner with a new automobile.

At a carnival being held by the Elks at Scranton, Pa., an automobile is to be chanced off.



The Week's Patents.

702,695. Sparking Device. Donald M. Bliss, Brookline, Mass., assignor to Holtzer-Cabot Electric Co., Brookline, Mass., a corporation of Massachusetts. Filed Nov. 7, 1901. Serial No. 81,432. (No model.)

Claim.-1. The combination with a series wound dynamo; of a sparking device in the main circuit thereof; a branch circuit connecting the conductors of the main circuit; a circuit controller in said branch circuit; and means for operating said circuit controller to close said branch circuit when the main circuit is open and vice versa, substantially as and for the purpose specified.

702,980. Steering Mechanism for Vehicles. Hiram Maxim, Hartford, Conn., assignor, by mesne assignments, to Morton Trust Company, trustee, a Corporation of New York. Filed Oct. 20, 1899. Serial No. 734,153. (No model.)

Claim.-1. In a motor vehicle, the combination of a steering pillar rotable about its axis, a bearing for said pillar pivoted upon the vehicle, an arm operatively connected with the steering mechanism and pivotally mounted upon the vehicle a gear fixed to said steering pillar and a gear fixed to said arm to cooperate with the first-named gear, substantially as shown and described.

703,075. Vehicle-Wheel. Charles T. McCue, Hartford, Conn, assignor to the Premier Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed July 20. 198, Serial No. 686,457. (No model.)

Claim.-1. An axle-arm, a cone supported

on the end of the arm and slidable lengthwise thereof, a bolt fitting a threaded hole in the end of the arm and having a head holding the cone in position, a hub supported on the arm, a ball-case located in the opening in the end of the hub and closely encircling the chad of said bolt, and means for holding the ball-case in position.

703,144. Electric Motor. James H. Mason, Brooklyn, N. Y. Filed Nov. 23, 1900. Serial No. 37,427. (No. model.

Claim.-1. In an electric motor, an armature in two sections, separate windings on said sections and an iron sleeve joining said sections' whereby the armature is made to virtually consist of horseshoe-magnets with outwardly-turned poles and with neutral points in said sleeve.

2. In an electric motor, two separate armature-sections, each composed of radiallyplaced arms carrying pole-pieces at their extremities, windings on said arms, an armature iron sleeve clamped between said sections.

703,185. Roadway for Motor Vehicles. Alexander Clark, Evanston, Ill. Filed Jan. 20, 1902. Serial No. 90,425. (No model.)

Claim.—1. An interesting junction for a highway and a roadway for motor vehicles, the latter consisting of two parallel tracks and parallel guard rails projecting upwardly from said tracks, said guard rails terminating at each side of the highway, and the tracks and the highway being graded to bring the same to an approximate level and thereby facilitate the passage of motor vehicles from the roadway to the highway and vice versa.

703,301. Motor Vehicle. Peter Poulson,

Chicago, Ill.., assignor of two-thirds to Simon Mayer and William F. Corey, Chicago, 1ii. Filed Sept. 15, 1900. Serial No. 30,129. (No. model.)

Claim.-1. In a motor vehicle the combination with a motor or engine, one or more traction wheels, and a frame or support, of mechanism for transmitting movement to said wheel or wheels, comprising a drive shaft, a counter shaft, gear mechanism connecting said shafts, and clutches each having two members, a shifter rod extended longitudinally and centrally in each of said shatts for affecting the shift of one of each of clutch members, and controlling mechanism for effecting the simultaneous shift of said shift rods.

703,220. Feeding Mechanism for Boilers. Rollin H. White, Cleveland, assignor to the White Sewing Machine Co., Cleveland, O., a Corporation of Ohio, Filed Jan, 3, 1900, Serial No. 223. (No model.)

Claim.-In a feeding mechanism, in combination, a supply tank, a main feed pipe, a boiler connected therewith, pumping mechanism adapted to force water from the tank into the feed pipe, an air chamber communicating with the feed pipe between the pumping mechanism and boiler, a by-pass leading from between the feed pipe and pumping mechanism back to the supply tank, a valve normally closing said by-pass but adapted by pressure to open it, a pipe for communicating pressure to the valve, which pipe is connected with the fluid on the opposite side of the air chamber to that at which the pumping mechanism is connected, substantially as described.

JEWELL BELTING CO.,

Manufacturers of

Tanners of Oak Belting Leather.

Main Office & Factories, HARTFORD, CONN., U.S.A.

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We Have Been Making Bells Since 1832



We think this pretty strong assurance that we know how to make well and sell them rightly. In the matter of automobile bells we believe the

BEVIN BELL

to be distinctly better than anything else of the sort on the market, It will afford us pleasure to foward you details and price on

BEVIN BROS. MFC. CO., East Hampton, Conn.

THE APPLE IGNITERS

MR. AUTOMOBILIST: Do you know that you are missing half the enjoyment of operating your machine if it is not fitted with this igniter?

Does away with worry about how long your batteries will last, the jerking caused by missing explosions, and you can make more miles

Entirely enclosed, water and dirt-proof. with the same consumption of fuel. If you



are buying a new machine specify this igniter.

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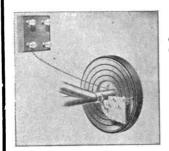
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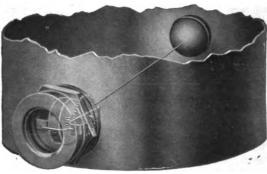


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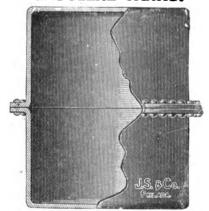
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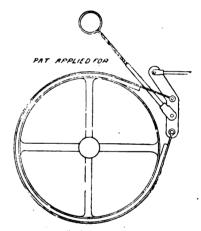
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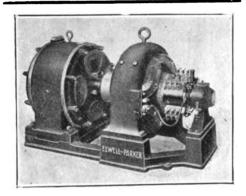
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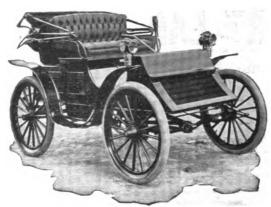
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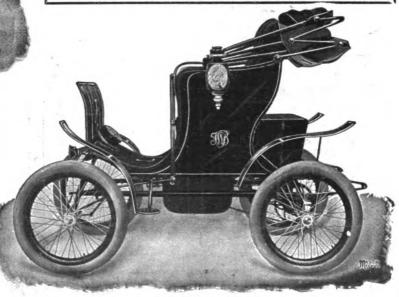
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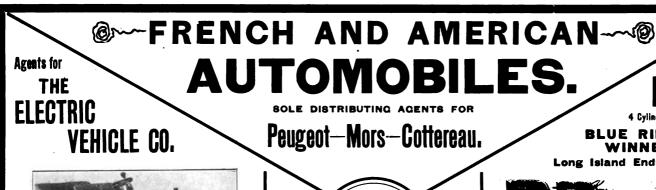
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The result of an experience dating back to the birth of the automobile industry in this country. Built and marketed by a company able and willing to carry out all its agreements and Fully Guaranteed by them.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, July 10, 1902.

No. 15

SOLOMON OUTDONE

A Measured Course, Policemen, Stop Watches, These Solve the Speed Problem,

A very Solomon is District Attorney Niemann of Nassau County, N. Y. Nassau County is on Long Island, and parts of it, particularly the Merrick road, are the favorite riding routes of a host of automobilists, cyclists, etc. Eight and fifteen miles an hour are the legal rates of speed, in the towns and country, respectively. Naturally the former is violated habitually and openly.

To restrict traffic in such sections to the absurd rate of eight miles an hour would seem a formidable task. But District Attorney Niemann undertook it—and performed it. So he says, at least, and Police Justice Wallace, who tried the prisoners, corroborates him.

For the heinous offence of driving automobiles at the phenomenal and dangerous speed of 15 miles an hour, as claimed, two automobilists were last Saturday fined \$25 each, and a third was held for trial, all at Rockville Center, L. I.

No doubt can be entertained as to their guilt, in spite of their protestations of innocence, for did not the local policemen do their timing? Equipped with reliable time pieces and themselves experienced in such matters, it is impossible that they could make a mistake of fractions of seconds even!

District Attorney Niemann had several courses laid out by the surveyors. They were located in Freeport, Hempstead and other parts of the county. On Saturday four officers were sent out to watch the roads in incorporated villages, where the law limits the speed to eight miles an hour.

The officers selected the Freeport road, and two men, stationed at each end of the course, held stop watches. When an automobile crossed the start and finish of the course the time was taken and the watches were compared. Then the vehicles were held up until their speed was figured out. In the cases roted the speed of the offenders was fixed at fifteen miles an hour.

This week the crusade was continued. The

culprits, however, proved to be mostly motocyclists, automobilists having taken warning. It is all so simple. Eight miles an hour within the town or village limits—the boundaries of which are not always known even by the authorities—and fifteen miles outside, these are the requirements. Singular to relate, however, horsemen never get caught. They never exceed eight miles, or if they do the police are too busy watching for the real culprits—those for whose benefit the crusade was started—to pay any attention to them.

If the lawbreaker should try to get away the fact does not worry the officers at the finish. They simply signal down the road to a point where a furniture truck is stationed. This is at once swung across the road and all traffic is stopped, so that the vehicle signalled must slow down and the driver submit to arrest.

The District Attorney stated that he had a dozen courses measured off in Nassau County. He refused to say where they are located, as he expects to make many arrests soon.

Chicage Run is Postponed.

The 100 mile endurance run of the Chicago Automobile Club has been suddenly postponed. Instead of being run on July 12 it will take place on August 2.

On Monday the directors of the club met and adopted the following self-explaining resolution:

"Resolved, That, on account of the extraordinary weather of the last month it would be unfair to expect machines to make a 100 mile test under the conditions imposed by the rules, and that the event be postponed until Saturday, August 2, and date of receipt of entries be extended to Monday, July 28."

Day Will Have a Car.

An 8 horsepower gasilene care is being manufactured by the Day Mfg. Co., Lakeville, N. Y., and will make its appearance shortly. It will be of the French type, with vertical motor in front.

There will be an auction sale of the effects of the Milwaukee Automobile Co., which went into the hands of a receiver a few weegs ago, on July 9.

KILLED IN COUNCILS

Deadlock in Quaker City Bodies Results in Nonpassage of Admirable Ordinance.

That Philadelphia's City Council should pass a sane and reasonable automobile ordinance at this time was almost too much to be hoped for, and the event proved that this pessimistic view was well founded.

The measure, after many vicissitudes, was "hung up" in councils, one body completely emasculating it by an obnoxious amendment, and the other—Select Council—refusing to concur. The result was an adjournment until October 2, without action of any kind being taken.

By the close vote of 18 to 17 the lawmakers of the Quaker City reduced the maximum speed permitted in the congested section of the city—that is, from the Delaware Rived to Sixteenth street, and from Vine to South—from ten to eight miles an hour. Then by a similar vote, only reversed this time, another amendment reducing the speed outside of these limits from fifteen to ten miles was defeated. This narrow escape from disaster was caused by one councilman, named Kucker, who changed his vote in the nick of time.

All this took place at the meeting of the Select Council held on Thursday last. Now the ordinance, as amended, providing for speeds of eight and fifteen miles an hour, will come up this week for final passage.

In the course of the debate on the second motion, that to make the speed in the city, outside of the eight mile limits, ten miles, instead of fifteen Councilman Lamond said:

"Why keep up this reputation of Philadelphia of being slow? The chauffeur won't run his machine at a dangerous rate, for his life is at stake as much as anybody's if he runs fast."

Then came the deadlock referred to, and the zealous efforts of the Philadelphia clubmen and tradesmen, under the leadership of Messrs. Warburton and Gallaher, respectively, came to naught.



BRITISH FALL TRIALS

Will Take Place in September—Daily Runs to Near-by Points.

Following the plan adopted last year, the Automobile Club of Great Britain will conduct the 1902 trials from a central station, making daily runs to divergent points. There will be six daily runs, the distances to be covered ranging from 62 to 136½ miles, and aggregating 650 miles. The first week in September has been set for the trials, beginning on Monday, the 1st inst., and ending with special tests on Saturday.

An elaborate programme has been arranged, and rules covering well nigh every point that can possibly come up have been compiled. The six day runs, starting from the Crystal Palace, London, are as follows:

Monday, September 1—Crystal Palace to Folkestone via Riverhead, and back via Sidcup. 136½ miles.

Tuesday, September 2—Crystal Palace to Eastbourne via Sevenoaks, and back via Edenbridge. 114¼ miles.

Wednesday, September 3—Crystal Palace to Worthing via Epsom, and back via Arundel. 119½ miles.

Thursday, September 4—Crystal Palace to Brighton via Bolney, and back via Cuckfield. 93 miles.

Friday, September 5-Crystal Palace to Bexhill via Sevenoaks, and back via East Grinstead. Including speed trial on the "flying kilometre" course. 123½ miles.

Saturday, September 6—Crystal Palace to Tunbridge Wells via Riverhead, and back via River Hill, Poll Hill and Westerham Hill, 62 miles.

Unless a car makes an average of 12 miles per hour on the route to Bexhill it will not be allowed to run on the track.

The trial is open to tourist cars only, the test being a trial of reliability, and including hill climbing and a speed run on the private course at Bexhill. No manufacturer will be allowed to enter more than two vehicles. There will be two sections, viz., one for motor vehicles and one for the parts of motor vehicles. With regard to cars the following is the classification:

Class A—Vehicles (cycles or cars) declared at a selling price of £150 or less; entrance fee £10.

Class B-Vehicles (cycles or cars) declared at a selling price of £200 or less; entrance fee £12.

Class C—Vehicles (cycles or cars) declared at a selling price of £300 or less; entrance fee £14.

Class D—Vehicles (cycles or cars) declared at a selling price of £400 or less; entrance fee £16

Class E—Vehicles (cycles or cars) declared at a selling price of £500 or less; entrance fee £18.

Class F—Vehicles (cycles or cars) declared at a selling price of £600 or less; entrance fee £20.

Class G—Vehicles (cycles or cars) declared at a selling price of £700 or less; entrance fee £22.

Class H—Vehicles (cycles of cars) declared at a selling price of £800 or less; entrance fee £24.

Class J—Vehicles (cycles or cars) declared at a selling price of £1,000 or less; entrance fee £26.

Class K—Vehicles (cycles or cars) declared at a selling price of £1,200 or less; entrance fee £28.

Class L—Vehicles (cycles or cars) declared at a selling price of over £1,200; entrance fee £30.

These entrance fees must be paid not later than July 12. After then the entrance fees will be increased by 25 per cent per week, and no car will be allowed to enter after Saturday, August 2.

No changing of sprockets for speed trials or hill climbs, or at any time during the trial, will be permitted. There will be a maximum number of marks for reliability for each day's run, viz., 300, and one mark will be deducted for every minute during which the vehicle is at rest from the time of starting to the conclusion of the run, except for (1) three compulsory stops per day for refreshments, viz., ¼ hour in the morning, luncheon 3/4 hour, tea 1/4 hour (the engine must be stopped, and the car may not be adjusted or replenished during the two morning and afternoon stops of 1/4 hour each. but only during the 34 hour luncheon interval; these stops may only be made at the specified places indicated in the programme, and cars must not restart after the luncheon interval until the hour specified in the programme); (2) traffic; (3) tire troubles; (4) accidental detours; (5) lighting carriage lamps,

The trials will include certain hills on which separate records from those of the day's run will be taken of the time occupied by the various vehicles in making the ascents. The marks awarded for the hill climbing trials will be calculated as follows:

H. P. × 100,000.

Price in $f \times 8$ for every shillingsworth of ... fuel consumed.

H. P. = Horsepower as shown by performance, which for the purpose of this formula will be roughly calculated as follows:
 Vertical height of hill × Weight of car and in feet.

lbs. for every ton of total weight.

$\frac{\text{Time in minutes}}{33,000.}$

The number of passengers carried during the hill climbing must not exceed the number carried during the other portions of the run.

The judges' committee will hold special tests on Saturday, August 30, and at other times, to ascertain whether the trial vehicles are fitted with sufficient brake power, and especially whether the brakes are so constructed that they will prevent the vehicle from running backward if stopped on a steep up-gradient. Marks will be deducted in accordance with the inefficiency of the brakes; also if the steering gear is, in the opinion of the judges, insufficient in design or material.

The committee of the Automobile Club will give medals on the recommendations received from the judges' committee appointed by the club: Section I, gold and silver medals, as first and second prizes in each class; Section II, parts, gold and silver medals. The awards will be made by adding together the marks gained by each car during the trial for—

- (a) Reliability:
- (b) Hill climbing;
- (c) Speed on private track (marks = speed in miles per hour \times 10).
- (d) Horsepower and weight;
- (e) Steering gear;
- (f) Brakes:
- (g) Condition of car at the end of the trial. The marks for horsepower, as shown by performance in proportion to the weight and the number of passengers carried, will be arrived at by the following formula:

Horsepower as shown by performance × 100 × the number of passengers carried.

Weight in cwts. (without passengers).

If a car has been driven before the trial the driver may call the attention of the judges to any worn parts before the trial. The maximum marks allotted in respect of the condition of the car after the trial shall be 500, and marks shall be deducted by the judges' committee for parts replaced, and a list of parts replaced in each car shall be published in the report.

The Changes Time Brings.

One of the greatest practical benefits to be derived from the general introduction of motor vehicles and the consequent banishment of the horse from streets will be the great reduction in the large number of stables now maintained in cities, and particularly the so-called "boarding stables," in which frequently several hundred animals are kept.

Most of these objectionable institutions will be converted ultimately to other uses, many of them, of course, as storage and repair shops for motor vehicles. With the departure of the equine occupants will come an appreciation in the value of the adjacent premises and the stable properties, with a general improvement in the appearance and health of the neighborhood.

The eviction of the horse is in progress in this city and almost every week sees the conversion of some stable into a motor vehicle storehouse. Several recognized automobile centres have been established, and it is a significant fact that each and every one is located in a former stable district, and most of the buildings were stables.



SERVING A WARNING

Entire Route of Race was Placarded With Notices Giving Full Details.

The following notice was posted along the entire route of the Paris-Vienna race, the language varying with the different countries:

"In order to develop the automobile industry, and the employment for industrial purposes of alcohol, an international race for motor cars has been organized from Paris to Vienna by the Automobile Club of France, with the assistance of the Automobile Club of Austria, in virtue of an authorization given by the President of the Council of State, the Minister of the Interior.

"Inhabitants are informed that the cars

British Electric Trials.

Beginning on Monday, July 21, and continuing throughout the week the Automobile Club of Great Britain will hold a series of trials for electric vehicles only.

The trial is a trial of reliability of all parts of electrical carriages, but not of the life of accumulators. The committee are of the opinion that a trial of six days is entirely inadequate for ascertaining the life of an accumulator.

There are to be hill-climbing trials; in these, speed will be an important factor.

An average speed will be fixed for each type of car.

Marks will be deducted for speeds below the normal.

Marks will be deducted for all stops other than compulsory stops, and marks will be deducted for every mile of the course which may be unfinished at the end of the day.

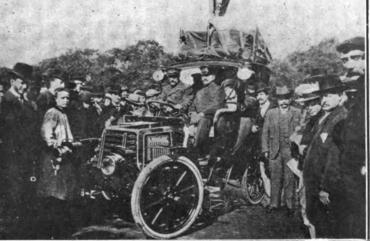
WITH THE TOURISTS

Their Journey From Paris to Vienna was a Very Enjoyable one.

While it was the racing section of the Paris-Vienna event which attracted the most attention and p ssessed nearly all the spectacular features, the run of the touring cars was not without its interest. Starting in advance of the races, taking a route which was, in the main, entirely distinct from that of the latter, and timed to reach Vienna on Saturday, June 28, one day in advance, the run was a most enjoyable one.

The start was made from the Hotel Pastoret, in the Place de la Concorde, at 8 a.m. on Thursday, the 19th ult., and occupied ten days in the journey to Vienna. The fol-





J. DUNBAR WRIGHT.

taking part in this race will cross the territory of the Commune theday of June, between o'clock and o'clock. The attention of masters and parents are called to the danger there may be in allowing children to be on the road, and the greatest care is recommended in this respect. Carters and drivers are earnestly requested to keep continually on the right hand side of the road, even should the middle of the road appear to be free. The roads should be freed from all obstructions, and all animals should be driven off the public way."

"The route will be marked out by means of triangular placards, orange in color, the apex of the triangle being placed in the direction in which the cars must go. A yellow flag signifies "forced stop"; a blue flag means slow down, dangerous; a black flag means slow down by order of the local authorities; a flag with the lower half white means full speed ahead. A hundred metres before any stop black and blue flags are placed, and a yellow flag exactly at the stopping place. Controls are marked with three flags together, the central one being yellow and the two side ones national flags,"

PARIS-VIENNA TOURING SECTION.

There will be two sections: Section one, town cars; section two, country cars. Both these will be sub-divided into (a) cars provided with batteries weighing not more than one and a half tons, and (b) those provided with batteries weighing over one and a half tons.

Three hundred marks a day will be given every day, except the fifth, and one mark will be deducted for every minute due to stoppages on the road, except, of course, those compelled by traffic. Five marks will be deducted for every stop for tire troubles, and twenty marks for every mile of the course which may be unfinished. Seven hundred and fifty marks will be allotted for excellence of design, which includes all the most practical points, while the same number will be given in connection with the trials on the fifth day, in which hill-climbing, speed, electrical, and the commercial efficiency and recuperation will be taken into account by the judges.

Californians claim that there are 600 automobiles in their State, two-thirds of which are owned in San Francisco.

M. LACARRIERE

lowing were the stages followed: Paris to Auxerre, Auxerre to Dijon, Dijon to Neuchatel, in Switzerland; Neuchatel to Interlaken, Interlaken to Ragaz, Ragaz to Innsbruck, in Austria; Innsbruck to Toblach, Toblach to Kiagenfurt, Klakenfurt to Graz, and Graz to Vienna.

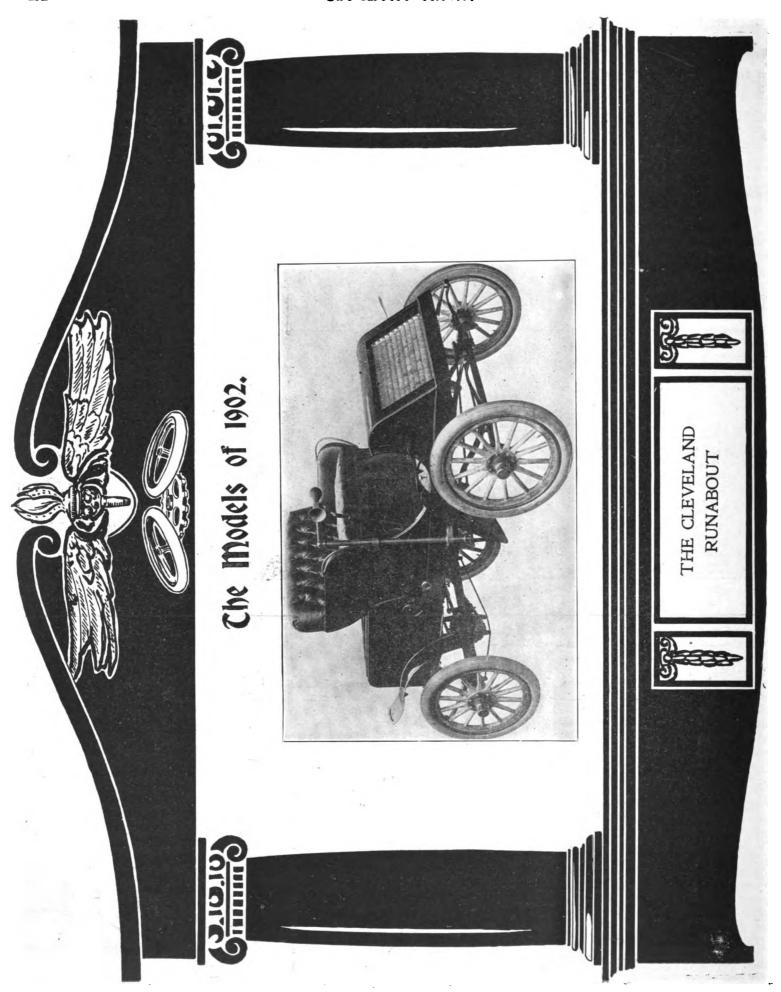
The illustrations show two of the vehicles ready to start. One of them was driven by J. Dunbar Wright, the well known vice-president of the Automobile Club of America, who has for some time been automobiling in Europe. The other is the car of M. Lacarriere, and appears to be pretty well laden with luggage and other impedimenta.

The interest taken is evidenced by the presence of the large number of spectators.

Across the Mountains.

William M. Vance, of Wheeling, W. Va., is touring his way home from this city in a twelve horsepower French touring car, with a tonneau body, which he purchased about a week ago. He is making a leisurely trip and will probably cover 1,000 miles before reaching home.







Published Every Thursday

By

THE GOODMAN COMPANY.

128-125 TRIBUNE BUILDING
154 Namau Street,
NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Leaden Office, 53 Fleet Street Paris Office, 2 Rue d'Abbeville					
Subscription, Per Annum [Post	age	– Pa	ld]		\$2.00
Single Copies [Postage Paid]					
Foreign Subscription					\$3.00
leveslehlu le					

Pestage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE GOODMAN COMPANY.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the facilities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Entered as second-class matter at the New York, N.Y. Post Office, November, 1900.

NEW YORK, JULY 10, 1902.

Growth of Touring.

That touring will ultimately be indulged in to an enormous extent is the firm belief of many longheaded automobilists.

They look to the automobile to prove the key which will open the now sealed gates leading to the suburbs, the country and the myriad points of interest which abound in nearly every section of the land.

As the bicycle did in its time, so the automobile will accomplish in this decade. With this difference: that the motor vehicle will appeal to all classes, the old, the weak, the infirm and ill, no less than the strong and healthy. Within half a dozen years, it is held, the roads will be swarming with automobiles laden down with passengers and all the paraphernalia of touring.

It is noteworthy that at the present time there is a distinct and undoubted advance in the number of touring automobilists.

Sometimes they content themselves with short runs of a couple of hundred miles'

duration. Again they are more ambitious, lengthening the trip into a thousand or even fifteen hundred miles, and taking in many charming sections of country.

Even in midsummer such tours can be made pleasurable if managed properly.

Judgment should be exercised in the choice of routes and roads, the mapping out of distances, the selection of hours. Early starts and late finishes, with the middle of the day devoted to sightseeing or other diversions, thus avoiding the heat and glaring sun, are to be commended, of course. As to the dust and its antipodes, mud, they cannot be avoided, and a certain amount of them must be reckoned with.

With judicious planning, however, there is no reason why a maximum of pleasure should not be obtained along with a minimum of disagreeableness.

Trials in two Countries.

It is interesting to compare the forthcoming trials of the Automobile Club of Great Britain, referred to in detail elsewhere, and those promoted and projected in this country

It will at once be seen that the riper experience of our English cousins leads them to arrange their trials on very different lines from those in vogue here. This is true in spite of the fact that in many respects the regulations bear a great similarity, one that is not to be wondered at when it is remembered that motor vehicle trials themselves, no matter where conducted or by whom, have but few dissimilar features.

It will be noted at the outset that the regulations governing the British event—the complete rules have not yet appeared—are much more elaborate than anything attempted or likely to be attempted here.

This is, perhaps, due to the different temperments of the two people. The Englishman likes to take his time about everything, to delve into all matters, to deduce and deduct, to calculate and compare, to sum up at vast length. To him six days of trials mean six days of hard but pleasurable and thoroughly enjoyed work.

Hence he crowds everything into that short week—reliability trials, speed trials, brake trials, efficiency trials and everything else that has any possible connection with the operation of an automobile.

Such exhaustive trials are possible in this country only where dollars and cents are involved, that is, where business vehicles are in question. Make the trials a matter of

business and we will dive as deeply into all the minutia of horse power tons, kilowatt hours and similar intricacies with avidity and without hesitation. But when we come to our outings or diversions it is a very different matter.

This view was clearly shown by the remark made by a member of the Automobile Club of America last winter. Touching on the advisability of having consumption tests in so-called endurance runs, he said:

"If you have a consumption test you may count me out. I know what I can do in the way of economizing gasolene; I can reduce the consumption by one-half. But I am not going to do it. It would take every minute of my time, and that I can use more profitably than in saving a few cents."

The British practice of classifying the cars according to their list price, instead of as with us, by weight divisions, has on the other hand, a great deal to commend it.

If we but go into the matter we will find that there is a marked affinity between the cars of the same price. Almost invariably they are of approximately the same weight and horse power, and a very nice apportionment is thus possible. It is rarely that one car has a marked advantage, either in speed or power, over another of the same price.

But it is doubtful whether the advantage of this method of classification is not more in the seeming than in reality.

If we should make a greater number of weight divisions, providing for classes for each 250 pounds difference, for example, it would be seen that almost the same end had been attained. It is obviously unfair for a 1,950 pound car to compete on equal terms with one of but 1,050 pounds; yet unless there is a more minute division such competition will always be possible.

Each has its Advocates.

It used to be said that of all the sources of trouble to which a motor car was heir none equalled in frequency and malignancy those traceable to the ignition.

It will be generally admitted that such time has passed, and the task of igniting the gasolene charge, while still no easy one, is accomplished without any greater difficulty than attends the approximately perfect working of the engine or other important parts of the vehicle. Certainly the ignition is no longer the head and front of the offending, and does not have to shoulder the blame when anything goes wrong. In such case it is but one of a number of places



where trouble may be reasonably expected to be found

If the ignition devices have lived down this malodorous reputation, however, the time is still far off when it may be said without danger of contradiction that this system or that one is the better.

The tube for igniting purposes has long since passed into a position of inferiority, and, notwithstanding it is used on business vehicles and a few of the more powerful pleasure cars of foreign make, it need scarcely be considered at all. It is archaic. Its very use subjects a maker to the suspicion of behind-the-age practices. Consequently it is almost never seen.

At the present time it is electric ignition that dominates the field. No real rival of it can be found.

But there are many kinds of electric ignition, all with devoted adherents. The latter wage battle unceasingly and have done so for years, and if present indications go for anything will continue to do so for a long time. Victory shows no great inclination to hover over any one of the rivals.

The condition of affairs is an anomalous one, for there has been, one would think, ample time for one system or the other to have demonstrated its superiority.

Are the mechanical generators—that is, the dynamos or magnetos—doing better work and giving greater satisfaction than the chemical (battery) ones, or vice versa? The answer to this question will depend entirely on the questioned one; and he will find arguments, clinching ones, to back up his asselvations. From his point of view there can be no question; but if the replies are collated they will be found to be antipodal in their character.

Doubtless the scale will incline to one side or the other in the course of time. But the present season seems to have done little toward this end, notwithstanding the expectations that were formed at its beginning.

All Lumped Together.

In the eyes of the officials of the Brooklyn Bridge an automobile is an automobile, no matter whether it carries one person or six, weighs 600 pounds or 3,000, or costs \$500 or \$20,000.

For the purposes of toll collection it is all one, and that one is equivalent to a double team—that is, a carriage or wagon drawn by two horses. In each case the bridge toll is the same, 10 cents. For a single team,

i. e., one horse, the charge is but 5 cents, while for three or four horses the rates are proportionately higher.

"We charge the same for an automobile as for a two horse team," explained the ticket seller to the Motor World man. "We don't care how big it is or how little. Ten cents is the charge, and as long as we get that we don't care what the machine looks like."

And while the little fellows may complain, and with some reason, at this lumping process, the tonneau-bodied sort have little reason to regard the matter as a hardship.

How Gasolene Prices Vary.

Offhand one would imagine that cheap, or at least reasonably priced, gasolene would be a sine pro quid if any but electric automobiles were to become popular.

Yet this country is about the only one favored in this respect. Here we can procure gasolene ad infinitum at such prices as 10 and 12 cents a gailon in barrel lots, and but little higher in small quantities. At such figures the cost of gasolene operation of the average car is almost nominal, scarcely equal to the expenditures for lubricating oil, repairs and incidental expenses.

If we turn to foreign countries, however, we find a very different state of affairs.

In England the automobilist pays about 25 cents a gallon for gasolene—petrol, as he calls it. Crossing over the Channel, we find that the Frenchman is mulcted to the tune of almost 50 cents for the coveted fluid, this being due very largely to the high duties which the French Government levies on about everything that comes into the country. Nevertheless, France is rightly regarded as the home of the gasolene vehicle, and millions of barrels of gasolene are exploded as recklessly as if the price cut but little figure.

In Germany the cost of gasolene is also high. One of the results of this excessive cost is the very general use of alsohol. Alcohol is a native product, and every gallon of it produced adds something to the meagre earnings of the agricultural population. Hence the kindly feeling of the government toward it, and the steady pressure that is brought on users to substitute it for the gasolene of foreign origin.

Passing south to Italy, also a poor and highly taxed country, the matter is still worse.

There the automobilist finds it necessary to pay almost \$1 a gallon for that form of petroleum which he finds necessary for the propulsion of his motor car. Here, as in the other Continental countries, high tariffs and remoteness from the chief sources of supply account for the "boosting" of prices. Apparently the proximity of the Russian oil fields, which are at least nearer than those of this country, does not avail to check the increase in cost. The best the Automobile Club of Italy has been able to do for its members is to establish stations where its members can obtain gasolene for the special price of 75 cents per gallon.

With the growth of automobiling and the passage of the motor vehicle into the hands of less wealthy users, the gasolene cost is certain to become a burning question. Few purses are long enough to stand such prices as some of those mentioned for an indefinite period.

A Remarkable Coincidence.

It is odd how the rough classification of motor vehicles—viz., that they cost \$1 per pounds, is borne out even at the present day.

If we exclude most of the foreign machines, the prices of which are increased inordinately by the twin systems of tariff and premium paying, it will be found that the rule referre to it pretty closely observed. An increase in weight means greater efficiency, power or speed, usually all three. What more natural, therefore, than that all this should cost money, and that the price should be increased in almost exact proportion to the weight?

Such is the actual result at least. The cheaper vehicles, weighing from 500 to 700 pounds, will be found to be priced almost dollar for pound; passing to the 1,000 or 1,200 pounders, the same rule will be found to apply; while the heavier classes, the surreys and the tonneaus, weighing from 2,000 to 2,500 pounds, are priced to correspond, almost as if intentionally.

Yet it will hardly be contended that such is the case. No maker ever thinks of the weight of his car when it comes to fixing upon a price on it. It is a coincidence; nothing more. But none the less it is a singular one.

It is now Chicago's turn to try its hand at an endurance run. Being the first event of the kind ever held outside of the East, it will be watched with considerable interest. The rules are more leinent than those of the May 30 event in this city, and the result will probably be a very good proportion of award winners.





In counting up the enemies of the automobile, if you are foolish enough to assume so gigantic a task, please don't omit the English sparrow from the list. For obvious reasons, closely connected with the commissary department, the sparrow is first, last and all the time opposed to the horse being eliminated or succeeded by anything but a horse

From up Westchester way comes the story of an alleged gypsy who is travelling in a big caravan, the motive horse power of which is supplied by a big gasolene engine. Despite his forsaking the horse for his own power supplier the gypsy in question is still a trader in the oat eater. Just what will happen when the Romany turns his well known ability to doctor up aged and decrepit horses so as to sell them for young and able animals, to practising the same kind of tricks with automobiles, none of us know, but most of us can imagine. The rural buyer of an automobile is in for some lively and expensive experiences in the not far distant future, I fear.

* * *

One of those kind friends who is always anxious to parade his knowledge by exposing your ignorance has just informed me that the doctors have not failed, as I feared they had, to dignify the alleged automobile caused throat disease with a properly impressive name. I am glad to hear this, because it will sound ever so much more aristocratic to tell your friends that you are suffering from an attack of empyema of the sphenoidal sinus-that's the official title, according to my informant-than it would to say you had a sore throat because you failed to keep your mouth shut while rushing through the atmosphere at-well, we'll say eight miles an hour.

Captain Bernier, whether gasolene, kerosene, alcohol or coal, I do not know, announces that he intends to comfortably slide to the North Pole in a sleigh invented by a Russian and propelled by a motor-name of Russian and kind of motor not given. Captain Bernier is at present in Montreal sending out bulletins of what he is going to do when he gets the money to buy the sleighs that the Russian is supposed to know how to make and motor. I am no Arctic explorer, nor am I a motor sleigh manufacturer, but I'll bet all the money owing me that when the North Pole is finally reached the hardy explorer who succeeds won't be indebted to any motor sleigh for his safe conveyance from civilization. Verily, there is one born every minute!

Here's a true story. An enthusiast bought a big French touring car, and with its pur-

chase hired a French chauffeur to run it, paying the imported gentleman \$90 per month, besides his board and clothes. The owner wanted to start in an endurance run and so notified his chauffeur. The latter had social or other engagements which made it inconvenient for him to leave the city at the time, so he sought to dissuade the owner. but failed. The day of the contest arrived and the big French vehicle was much admired, and its owner was sure, so sure, of the record he was to make that he unnounced a little dinner in celebration thereof. Hardly twenty miles had been covered when the big vehicle was in trouble, and in less than five miles more it had stopped altogether. The owner said things in English, not drawing room English, either; the Frenchman answered in French and expressive shrugs. The run had to be abandoned, and a subsequent examination of the vehicle by an expert showed that some one had deliberately tampered with it so as to make it break down. Of course no one can say the Frenchman did this, but we can all draw our conclusions, and some of us will draw them right up against that Frenchman.

* * *

In the choosing of a suburban home today the well to do city man no longer takes "mileage" into consideration. Roads, their eonditions, gradients and up keep are carefully studied, and the decision is based upon these determiners of "hourage," not "mile-The automobile is responsible for this new method of computation. Hourage is the real test of distance, according to latest notions of individual speed locomotion. and the economic, social and political results to be evolved from the application of the hourage idea will eventually get beyond all imagination and precedent. When by the means of an automobile the man who formerly reached his suburban home at the convenience and pleasure of a railway time table, can now start at any time it may best suit him and make the journey in, say half the time, can you not appreciate what that means? Of course, the anti-progressives will say that only a millionaire can own an automobile and so bring his suburban home nearer the city. While this is not entirely so, grant that it is, and what then? The millionaires are paying now for the experiments which will ultimately put the automobile at the disposal of any man who can now own a horse, and thus hourage will each day grow more and more the way distance will be considered by the vast body of the people.

There was one of Napoleon's marshals, Ney, I think it was, who always went in to battle dressed as if for a ballroom fray. History says that despite this affectation the marshal aforementioned, thanks to his soldiers and other necessary helps, succeeded in winning hard fought battles. However true all this may have been in Napole nic times, it is a bit out of date to-day, and the

bodies of British officers, who sought to play the same kind of a dress parade game, are now fertilizing South African veldts. Today a man must not only act his part in life, but he must be prepared to dress it, too. Mr. Foxhall Keene might take this lesson to heart. He, too, was evidently thinking of the French marshal when he started in the recent race to Vienna dressed as though he was going to a pink tea at Clairmont. That Mr. Keene should ultimately be landed on his head with a damaged racer and a rumpled costume was but natural. Mr. Keene always succeeds in breaking himself up in his athletic attempts, and this year's smashup was but a repetition of the same kind of one he indulged in last year in the same event. If Mr. Keene does not value his life enough to stop this high and lofty tumbling, which he evidently mistakes for motor racing, it would be an appreciated kindness.on his part if he would refrain, so as to save the reputation of American automobiling. which through his antics is liable to be misjudged abroad.

Why will the Vanderbilts persist in injuring automobiling? To no one, unless perhaps it might be Mr. Bishop, is automobiling in this country so indebted for its disfavor as to W. K. Vanderbilt, jr. I had thought that when we had get safely rid of William Jr. by sending him to France, there to be taught good manners by spending a night in a police station, that maybe for a little time American automobiling was to be free from the Vanderbilt plight, but it was not to be! Reginald, the younger, and the plunger, has taken the matter up where his brother William temporarily dropped it, and already has succeeded in having himself warned and his French driver fined for scorching at Newport. Not content with the local disrepute thus gained, Master Reginald has announced that he is going to stir the animals up in the Berkshire region, where temporary quiet has reigned owing to Mr. Bishop being in Europe with Reggie's brother Bill. That the Berkshireites may be duly prepared for what is coming, the Vanderbilt press agent has announced that Reggie is preparing to break all existing records, laws, rules, regulations and what not between Newport and Lenox, no matter what the natives say or the fines imposed. Here is an excellent chance for Americans to follow a French example and to jail this young Vanderbilt sprig if he attempts to carry out this speed programme of his. To a young man who even thus early in his career has been credited with disconnecting himself from a fortune through the medium of a professional gambler masquerading as Dame Fortune, fines are as nothing, but jails; well, they are cooling to young blood, even young Vanderbilt blood. If we can't stop this Vanderbilt foolishness any other way, then let these incurable speedomaniacs be placed behind the bars where they can no longer terrorize law abid-

THE COMMENTATOR.



ing citizens.

Two Brakes Necessary in Chicaga.

Chicago is apparently determined to retain its reputation for stringent regulations concerning automobiles and automobilists. Last week a new ordinance was prepared by City Electrician Ellicott and submitted to Mayor Harrison, Corporation Counsel Walker, representatives of the park boards and other officials.

Under it two independent sets of brakes must be provided for each automobile.

One of the brakes or sets of brakes must be independent of the driving gear. Either brake must be sufficiently powerful to bring the vehicle to a full stop within ten feet when travelling at a speed of eight miles an hour.

The speed limit is left at eight miles, with an understanding that it may be made twelve miles an hour in unfrequented streets.

The penalty for violating the measure is \$5 to \$25 for each offence. The badge must be worn in a conspicuous place on the person of the operator, outside of the coat. No alarm may be used except a bell, which must be not more than four inches in diameter.

Attachment Served; Future Doubtful.

Great reticence is still maintained concerning the affairs of the Steam Vehicle Co. of America. Last week Deputy Sheriff Govan served on President Schwarzenbach an attachment for \$15,000 against the company in favor of George S. Edgell and Austin Corbin, doing business as the Corbin Banking Company, on a note of the defendant, dated August 13, 1901, payable on demand. The attachment was granted on the ground that it is a New Jersey corporation.

In response to the stereotyped inquiry of the Motor World man whether there was anything new to be said concerning the company's ffairs, President Schwarzenbach replied:

"No; nothing that I know of."

Asked if he still thought that the company would continue in business, he said: "I don't know anything about it."

Kohl has big Plans.

It is the intention of the Kohl Automobile Co., Whitney's Point, N. Y., to manufacture automobiles on a large scale. Writing to the Motor World from Cleveland, O., Edward Kohl, who is the practical man of the concern, says:

"It is a little early to give you definite information at this time. But will say that our intention is to market an automobile of medium weight and of the best type and with all improvements in automobile construction, which we will sell at the most reasonable price. We shall in all probability sell only to agents. It is our intention to turn out from twenty-five to fifty vehicles a month at the start."

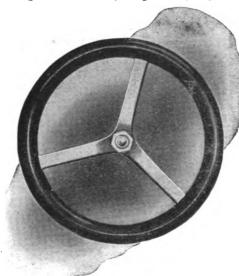
The Indianapolis (Ind.) Automobile Club will probably join the American Automobile Association.

Difference Between City and Country.

The German Kaiser is determined to check motor car racing in Berlin and Potsdam. His high spirited Hungarian horses have not been "broken in" to motors, and an accident nearly happened recently when Emperor and Empress were driving in the capital. Rigorous laws and heavy penalties are to be enforced against scorching in crowded city streets. But the Kaiser advocates high speed in the country, and has just had a modified racing car built for his own use during the summer holidays. The Emperor is now the owner of four motor cars.

Dyke's Steering Wheels.

With a steadily growing popularity of wheel steering has come an increased demand for the wheels and other parts. In order to meet this demand A. L. Dyke, the well known St. Louis, Mo., parts house, is offering a wide variety of patterns, a good



idea of which may be obtained from the accompanying illustration. The wheel is made of wood with brass spider, the latter being nickled or plated, as desired. It is not bored, but left blank, so that it can be bored and threaded to fit any steering device. Wood wheels 12, 13, 14 and 15 inches in diameter in rosewood, mahogany or oak are supplied.

Hard on Invalids.

The sanitarian is a prosy person, and he invariably discovers death in every sport. The latest sanitarian sentence on motor cars is that they have made the Riviera uninhabitable for invalids, because they are dust raisers. Of course, it isn't true; but, if it were, after all is said and done, healthy people must have a look in sometimes. The whole world isn't built for invalids.

Caught the Britishers.

"An American Duo in an Electric Car" is the caption over which Motoring Illustrated reproduces the clever drawing by Henry Hutt, of the Waverley electric which the International Motor Car Co. recently got out. It shows up very effectively.

Fast Time is to be Expected.

If records do not go by the board at Brighton Beach on August 23 it will not be the fault of the Long Island Automobile Club or of the track association. The latter expect to have the track in the pink of condition, while the former are devoting their efforts to obtaining an entry list that will surpass in speed qualities anything ever seen in this country.

The famous Fournier Mors car, now owned by E. E. Britton, which holds the mile record (0:51 4-5), will be on hand, and will probably start in thre events. Henry Ford of Detroit, who, with "Tom" Cooper, the wilholm bicycle "speed merchant," is building two 80 h. p. speed cars, has assured the committee of his determination to enter and start.

A. R. Pardington, chairman of the race committee, is very much pleased with the outlook.

Pittsburg Tries Motor Racing.

Four automobile races were run at Schenley Park, Pittsburg, Pa., on July 5, in connection with other track and field events, all having been postponed from the previous day on account of vain.

In spite of the heavy and slippery track, due to a severe rain that afternoon, good time was made, and the audience of 6,000 people were evidently very much pleased with their first real taste of motor vehicle racing. An exhibition mile was ridden by W. N. Murray in 1.42 2-5, an excellent performance for the half-mile track. The summaries follow:

Two-mile automobile race for gas machines under 16 horsepower—C. H. Owen, first; W. N. Murray, second. Time, 4:203-5.

One-mile open, final heat—Percy Brown, first; Paul J. McLain, second; F. A. Dahlke, third. Time, 2:203-5.

One-mile automobile, steam machines—W. N. Murray, first; Thomas Hoey, second. Time, 2:13.

Five-mile handicap—Percy Brown, scratch, first; Gust Furtos, scratch, second; Harry D. Smith, 110 yards, third. Time, 12:03 4-5.

Will go to London, Ohio.

The Columbus Motor Vehicle Co., now located at Columbus, Ohio, will remove to London, O. The change is made in consequence of successful negotiations with prominent citizens of the latter place. They will donate a factory site, will give a cash bonus and subscribe \$25,000 worth of stock at par.

At present the capital stock of the firm is \$50,000, but as soon as the removal is made this will be increased to \$150,000. The plant at London will give employment to 100 men, and five machines will be turned out each day.

On Saturday last C. J. Glidden, of Boston, prominent in this country and in England as an ardent automobilist, sailed on the Lucania. He will tour in Europe during the summer.



SHE HESITATED

And the Automobile she Wanted was Sold — "She" is Mrs Howard Gould.

That she who hesitates is lost was demonstrated anew last week by the story of Mrs. Howard Gould and the automobile which she did not buy—a story which may or rot be true, as it is given on the authority of The World.

"Mrs. Howard Gould has an ambition. Not satisfied with possessing one of the most elaborately equipped and luxuriously furnished steam yachts affoat, she now wishes to own the swiftest automobile in America.

"Mrs. Gould was shopping for automobiles last week when her eye lighted on the red painted, highly polished 40 horsepower Panhard in the show rooms of Smith & Mabley in Seventh avenue. Mrs. Gould tried the machine and was delighted. Still, she went away without arriving at any very definite understanding, and said she would look at the Panhard again.

"Veryi Preston is a member of the United States Steel Corporation. Automobiling to him is something more than a pastime. Like Mrs. Gould, he has a yearning to annihilate space in the heavy motor cars. It was Mr. Preston who, upon returning from Ardsley Casino in a record smashing auto, with two charming women, met with an accident. There was much mystery as to the identity of Mr. Preston's companions until it was cleared by the World.

"When Mr. Preston saw the 40 horsepower car at Smith & Mabley's he wrote his check for \$16,000.

"The next day Mrs. Gould telephoned that she would buy the machine.

will be a 40 horsepower, the other a 60 horsepower auto.

"With her Mercedes of 16 horsepower Mrs. Gould will own three of the fastest machines in the country. Society is looking forward to seeing Mrs. Gould herself at the steering gear."

No Truth in the Story.

There have been many rumors of the establishment of American factories for French or other foreign automobiles, but in nearly every case they proved to be figments of the imagination.

One of the latest of these had to deal with the Electric Vehicle Co. and the Panhard cars. The former were at work on an American-built Panhard, the rumor declared, and arrangements had been completed for their manufacture. As a matter of fact, the report is fiction, pure and simple. "There is no truth whatever in the statements to the effect that we are to build an American Panhard, neither is Mr. Hart O. Berg connected with the enterprise in any way," the company write the Motor World. "We are working on several gasolene models at the present time, but are not yet ready to make any statements."

Six Miles Suits Hightstown.

Hightstown has tackled the problem of automobile speed regulation, and with gratifying results. Six miles an hour is the maximum rate at which the moter vehicle will be allowed to perambulate the congested streets of that populous borough, and woe to the luckless wight who exceeds it. He will find that the way of the transgressor is hard. Hightstown, be it said for the benefit of those who are ignorant of its whereabouts, is in Southern New-Jersey, not very far from Trenton. Its proximity to

THEY ENDURED

Those Who Survived in the First Motor Bicycle Endurance Contest.

While the motor bicycle is but an evolution of the motorless bicycle, and as such belongs distinctly to the bicycle manufacturing industry, positive work accomplished by these little machines cannot fail to interest the motor vehicle maker, if they do not furnish him with manufacturing data. In line with this view, the results of the motor bicycle endurance run from Boston to New York, held on July 4 and 5, under the auspices of the Metropole Cycling Club, of New York, are noteworthy.

Of the thirteen survivors seven finished with perfect scores of 1,000 points each, thereby earning gold medals, the highest possible award. Two others secured blue ribbons for coming within 50 points of the highest scores, one a red ribbon for earning within 100, and one a yellow ribbon for 150 points within the highest totals. All survivors who failed to earn gold medals will be awarded bronze medals.

The working parts of each machine were marked before the start for identification, and no points were lost by any survivor because of replacement of any parts. The scoring was carried out on a basis of 100 points for each control, there being a fast schedule of 15 miles per hour and three slow schedules of 8, 10 and 12 miles per hour, according to classified horse powers. Penalties were given of one point for each minute that any rider fell behind his slowest allotted time.

The scores as announced by the committee in charge are as follows:

Name.	н.Р.	Bicycle.	So. Framingham	Worcester	Warren	Springfield	Hartford	Meriden	New Haven	Bridgeport	Greenwich	New York	Total points
George M. Holley, Bradford, Pa	21/4 13/4	Holley	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100	100 100	1,000 1,000
George W. Sherman, Brooklyn, New York	13/4	Indian	100	100	100	100	100	100	100	100	100	100	1,000
O. L. Pickard, San Francisco, Cal	$\frac{1\frac{3}{4}}{2\frac{1}{4}}$	Indian	$\frac{100}{100}$	100 100	100 100	100 100	100 100	100	100 100	100 100	100 100	100 100	1,000
L. H. Roberts, Waltham, Mass	3	Orient	100	100		100	100	100	100	100	100	100	1.000
William B. Jameson, Waltham, Mass	3	Orient	100	100		100	100	100	100	100	100	100	1,000
N. T. Marsh, Brockton, Mass	13/4	Marsh	100	94	100	100	100	100	100	100	100	100	994
F. W. Tuttle, Hartford, Conn	21/4	Cleveland	100 100	100 100	83	100	86	100	100	100	100	86	959
Emil Hafelfinger, New York	$\frac{1\frac{1}{2}}{1\frac{3}{4}}$	Royal	100	95	100	100	44 64	100 100	100 96	100	100	100	94
Joe Downey, Brockton, Mass	2	Mitchell	100	100	75	100	1	100	61	19	100	28	85 55
Henry Allmen, New York	-	Mitchell	100		1	1	1	100	1	1	1	1	30

"When she heard that it had been sold Mrs. Gould expressed her disappointment and displeasure pointedly to Mr. A. D. Proctor Smith. She was not in the least delighted.

"When the disappointment wore away, however, she ordered not one machine, but two, the fastest that money could buy. One what is usually termed the "sand belt" will, however, deter most automobilists from visiting it and thus calling down upon their devoted heads the wrath of Hightstowners.

A new motor vehicle which will reach a speed of 105 miles an hour is promised by Siemens and Halske, the famous Berlin electricians.

As to Terminals.

All coils should have their terminals similarly initialled or otherwise marked for identification, so that there will never be any difficulty in coupling up the high and low tension wires, and if a universal marking were adopted by makers there would never be any hesitation, and a good bit of time would be saved.



Field in Porto Rico.

Extremely primitive are the transportation facilities in Porto Rico. For years it has been the custom on the island to transport goods to the ports from inland points on bull carts. From the more inaccessible points the island products were brought to the interior towns on pack animals, and from these towns were carried to the "central road" and over this to San Juan or Ponce in the carts.

These carts travelled largely at night, and were necessarily slow. The price charged for transportation was excessive, and made it not worth while for planters in the interior to send any large amount of their products to cities. The long trains of carts were a great obstruction on the roads, and made travelling in the coaches or in carriages slower than it otherwise would be.

A plan now proposed comprehends a number of powerful automobiles, which will draw trailers. Stations will be established along the road to which the carts will bring their merchandise. At these stations the automobiles will stop and take on freight. The service will be much quicker and will thus give impetus to the development of the fruit lands, of which there are large tracts on the island. It is also claimed that freight can be transported by automobiles much more cheaply than by the carts. At present this plan would work only on the "central road," but soon a new road from Ponce across the island to Arecaibo, built on the most improved plan, will be opened, and automobiles may be installed there. They may operate soon also from Guayama to Arroyo, and on the Mayaguez-Las Marias and Aquadilla-San Sebastian roads. company has already secured the mail contract from San Juan to Ponce, and if the plan works as well as expected probably an automobile mail service may be in operation between all the principal points of the island.

With the fine roads that are constructed or are now under construction, Porto Rico offers an exceptionally fine field for the automobile. It has no steam line to compete with except that which is being constructed to parallel the coast, and the grades would make it almost an impossibility to construct electric lines across the island.

Chausseurs Form a League.

So marked have become the evils arising from the fact that the ranks of professional drivers have been considerably swollen by a number of young men who are attracted by the good pay, and have not the qualifications for taking charge of an automobile, that about a twelvemonth ago the professionals in Paris, who have undergone a course of training in motor shops and as drivers, formed a Union des Conducteurs d'Automobiles, whose sole object was to enable employers to secure the services of really competent drivers. No one could belong to the union unless he possessed all his certificates, and could give the best refer-

ences as to competency and respectability. Despite the services which it seemed capable of rendering, the union has been making little headway since its formation, but of late the syndicate has been placed under more energetic management, and there seems every probability of its taking a prominent place as an intermediary between automolibists and professional drivers.

In Hackensack and Teaneck.

An ordinance has been drafted and will be presented to the Hackensack, N. J., commissioners this week, limiting the speed of automibiles to six or eight miles, with a penalty of \$50 for the first violation and \$100 or two months in prison or both for a second violation.

In Teaneck Township, across the Hackensack River, an ordinance has been prepared making the speed limit fifteen miles, but compelling an automobile driver to slow down to six miles in passing any vehicle drawn by horses and to stop on signal from a person driving a horse. The penalty is not less than \$50 nor more than \$100.

Both ordinances require the owner's initials on an automobile in plain and conspicuous letters.

Profitable for the Natives.

Joy will no doubt fill the breasts of automobilists fortunate (?) enough to have their habitation in Union Township, N. J., seeing that the new speed ordinance provides that any person "seeing a violation and giving evidence which shall secure a conviction shall receive half of the fine." This clause will make it easy for any watchful resident to earn \$25, as the fine is to be \$50.

The ordinance, besides limiting the speed of the horseless vehicle to ten miles an hour, requires that between one hour after sunset and sunrise a lighted lamp, of such illuminating power as to be plainly seen 100 yards, must be attached, also an alarm bell, which, when rung, can be heard 100 feet distant. In addition to the \$50 fine, imprisonment for five days may be added to the sentence.

Their Harvest Time.

The glorious Fourth proved to be a glorious day for those dealers in this city who had automobiles to hire. They did a thriving business, not a car that was fit to go out being found in any of the rooms after midday. Fancy prices, too, were paid for the use of automobiles, with chauffeurs, in some instances more than double the usual rates being obtained.

At some of the larger garages, where foreign made machines are occasionally let, the extreme rates were exacted and readily paid. One Panhard car, seating six persons, started from the Waldorf-Astoria with a party of Western business men for a run to Hempstead, L. I. They had to pay \$125 for the use of the car. Others at equally high rates were in demand early in the day.

McCan's Far-Reaching Project.

All of Buffalo's present automobile concerns are to be overshadowed and outclossed. D. C. McCan, "the famous automobile expert of Europe," is about to establish a gigantic automobile manufactory there which will make Buffalo the centre of the motor vehicle interests of this country. Skilled artisans will be imported from France, and, added to the native workman, will make a "small army," to pay whom a "stupendous" amount of capital will be necessary.

As told by the Buffalo Enquirer these are the additional details:

"Mr. McCan reached the city a few days ago and is now at the Tifft House. He has all his plans made and this morning was ready to speak of them. He has rented for a term of years the large building at Nos. 58, 60 and 62 Broadway, and will there locate his plant. Workmen will be put on the building the latter part of the week, and within a month, new cement floors will be laid and hoisting apparatus will be installed.

"The machinery to be used in the constructing of the McCan horseless vehicles has been ordered, and will be shipped to Buffalo immediately. Besides the erecting of shops, he will conduct a department in which owners of automobiles can have their machines charged and repaired.

"The machine which Mr. McCan will build will be different in many ways from most American made machines. Its greatest point of difference will be in its weight. His machines will not be cumbersome, but will be, as he believes, better suited to all classes of travel than are the lighter machines now being constructed by the American concerns. He will follow closely the French patterns, which he believes to be the best in the world. A simple steering gear and wheels with nonnuncturable tires will be used. The motive power in most will be generated by gas motors, but in some he will institute an innovation in electric carriage building and will use two motors, electric and gas, each of 5 horsepower. The machine will be fitted with an automatic arrangement, which will eliminate tedious waits while power is being generated and will start the vehicle at once."

Recent Incorporations.

Newark, N. J.—Auto Vehicle Co., with \$15,000 capital, to manufacture automobiles, etc. Incorporators, Belle M. Paddock, George Paddock and George T. Cole.

Camden, N. J.—Mobile Transportation Co. of New Jersey, with \$100,000 capital. Incorporators, William S. Dilks, Frank A. Sherwin, John F. Crawford, Irving Turner and John Harris.

The Week's Exports.

British Possessions in Africa-1 case auto vehicles, \$1,000.

Copenhagen—1 case motor vehicles, \$75. Havre—89 cases motor vehicle parts, \$900. Hamburg—2 cases auto vehicles, \$100. London—12 cases motor vehicles, \$9.360. Uruguay—2 cases motor vehicles, \$779. Vienna—1 case auto vehicles and parts.



THE LAND OF IND

It Bids Fair to Become a Very Good Market for Motor Vehicles.

There is a growing belief that India will eventually prove a valuable market for the sale of automobiles. Several large French firms have already sent representatives to study the requirements, realizing the wisdom of giving the people what they want, instead of trying to force upon them another nation's notion of what should be good for them.

The French Consul at Rangoon says that that city is disposed to absorb a huge number of motor vehicles of every description, the distances being enormous, the suburbs and surrounding country having magnificent

Baited His Hook and Caught Cannon.

An astute man is Chief of Police Urquhart, of Manchester-by-the-Sea, the famous North Shore resort for Boston's summer colonists. Notwithstanding the fairly reasonable speed restrictions in force, viz., 10 miles an hour in the town limits and fifteen miles on the country roads, there have been many complaints of excessively fast driving. These infractions of the law Chief Urquhart determined to put a stop to.

That there might be no failure of a conviction when an arrest is made he had three measured stretches of a quarter of a mile, each consecutively under the eyes of policemen, who are stationed with stop watches to time speed enthusiasts. This fact had become bruited abroad, and every owner of an automobile in the town was on the hunt for a tip as to the location of the fatal

THE KING'S CAR

A Good Specimen of the Automobile Maker's Art—Its Luxurious Body.

That the King of England should prefer German automobiles to those of French manufacture is not altogether surprising. Blood is thicker than water, and that in the King's veins is composed very largely of the laind met with in the Fatherland.

The latest addition to the royal stable is unquestionably a very fine car. It is a 22 horsepower Daimler, geared for power rather than speed. Indeed, the chief desideratum in a car of this character is reliability. It should be able to go anywhere and everywhere, over any character of roads, and in order to do this a great deal of power is



KING EDWARD'S 22 H. P. CAR.

promenades, and horses being unable, on account of the heat, to stand long drives. The high salaries of many English officials allow them to indulge in motors, and the city is rich in merchants and successful business men. For the Chinese residents the fact that European monarchs and princes possess automobiles is cause enough for them to approve the fashlon. But manufacturers who wish to succeed should remember that the Indian is impressed by appearances. He cannot understand a \$5,000 or \$7,500 carriage which lacks gilded or silver lanterns and other decorations. Duty is 5 per cent ad valorem.

For transport and business purposes, if it be shown that motor vehicles can be run at less cost than bullock wagons over the enormous distances traversed in India, there is a great future in store, for these Indian roads are at least as good, and many infinitely better, than in England. Motor power might help to relieve famine by making food distribution easier.

quarter mile stretches of road that he might slow down to a funereal pace within b unds.

But the wily chief professed to change his men and his measures constantly. The first fruits of the plan came when three automobilists were arrested for excessive speed, and one of these, George C. Cannon, of New York, a student at Harvard, was fined \$25.

Exhibition at Delhi.

There will will be held at Delhi, India, next Janaury, an exhibition at which all manufacturers of motor vehicles are invited to exhibit. It should be noted, however, that the use of gasolene is surrounded with strict precautions in the tropics, and most motor vehicles which have been sent to British India or Java have been equipped, for this reason, to use ordinary paraffin as fuel.

The receipts of the French Auto Club for 1901 were \$47,275.

required. This has been supplied, and its owner will be able to derive even more pleaure from motoring than he has done hereto-

The most notable part of the car is the body. In other respects the vehicle differs but little from the ordinary Daimler cars. But the body is notable. It renders automobiling luxurious as well as exhilerating.

The roominess of the body, its ease of access, the elaborate precautions taken to shield the occupant from the inclemency of the elements and, as far as such a thing is possible, from the dust, at once attract notice. It is no more than justice to say that as much attention has been given to these matters as is given to the horse drawn vehicles in the royal stable; when this is said all is said.

During the summer session of the Imperial Technical High School at Alx-la-Chapelle, Germany, a series of lectures on automobile construction will be delivered by Prof. Lutz.



SOMETHING DOING

In the Steel Road Project—Steel Trust Comes to the Rescue.

Something really practical is at last about to be done in the matter of steel road building in this country. Within the next two months it is expected that three sample sections of road will be laid in this city—one in the heavy trucking section downtown, a second in a street given to general travel, and a third on a macadamized suburban road.

This result has been rendered possible by the hearty co-operation of city officials with members of the Automobile Club of America, and the individual efforts of the latter, all working to carry out the project of General Roy Stone, whose belief in steel roads is well known. President Cantor has interested himself, and by his direction Chief En-

International Race in Belgum.

On July 27 the Automobile Club of Belgium, in conjunction with the Automobile Club of Namur and Luxembourg, will hold an international race under the title of the "Course du Circuit des Ardennes." The route selected is a circular one of 85½ kiloms, in the neighborhood of Bastogne, and it will be covered six consecutive times, making 512 kiloms, in all. There will be four classes—one for cars of 700 to 1,000 kilogs., another for lighter vehicles of 400 to 700 kilogs., a third for voiturettes below 400 kilogs., and a last for tourist vehicles weighing over 1,000 kilogs, and carrying at least four persons.

Used Truck as Press Stand.

In the energetic work done to induce the Philadelphia City Councils to pass a rational ordinance for the regulation of automobile traffic a very prominent part was borne by Vice-President Gallaher and others connected



FOURNIER-SEARCHMONT AT BRAKE TEST.

gineer Olney will pick out the places where the different sections will be laid.

Even after having obtained the support of the Automobile Club of America, both moral and financial, however, it was found impossible to obtain the steel for the roadbed. The steel mills would neither make special sizes of sheet steel nor promise prompt delivery of stock sizes. In this dilemma Treasurer Jefferson Seligman, of the A. C. A., approached President Charles M. Schwab of the United Steel Trust, and soon had him interested in the project, and as a result the latter will not only furnish the special forms and deliver them promptly, but will contribute the steel for a mile of road as a free gift. General Stone has already conferred with the steel corporation's experts in regard to the details of construction, and the material will be delivered in six weeks. The track plates will be 12 inches wide and will be laid on special foundations of broken stone.

An English engineer who recently inspected the steel road at Valencia, in Spain, reports in the highest terms of it in every particular. This road has been in use for ten years.

with the Fournier-Searchmont Motor Co. On the day of the brake contests in Fairmount Park quite a hit was made by the company's freight truck, shown herewith. It was fitted with automobile seats and loaded with newspapermen and tradesmen, and sent out to the testing ground, where it was made use of as a press stand.

All About Morgan Motors.

Free from spread-eagleism and embelishment, yet artistic and comprehensive, is the catalogue which the Morgan Motor Co., Worcester, Mass., have just issued. It deals with power trucks exclusively, the company's product being described both as a whole and in the minutest detail. The motive power used is, of course, steam, and its application, engine and boiler construction, etc., are gone into at some length.

A Hackensack Motor House.

An automobile house has been built by William Morse at his residence, Hackensack, N. J. It is a one story building. The automobile room, which is 24 by 50 feet, has a washing platform, a pit and a work bench.

KNOCKERS CONTINGENT

Has its say About Single Tube Tires—English of Course.

It is small wonder that single tube tires have a hard row to hoe in England, so strong is the prejudice against them. The following rot, from a supposedly well informed automobile journal, can scarcely be read without a smile, so evident is the bias displayed:

"In repairing single tube tires, which are beginning to make their appearance in England, the plug should be regarded as a mere temporary expedient. Every puncture of the big tires should be vulcanized, which takes from three to four days, and costs according to the size of tire and the damage done.

"If the tire about to be repaired will cost more than half the original price of the tire, it had best be consigned to the dust heap and a new one purchased. A tired-out, stretched, or age-showing tire isn't worth much tinkering, as you have to count the cost of taking the tire off the rim and replacing it. Car owners should keep a spare tire on hand so that an invalided tire doesn't involve laying up the car.

"Keep your tires well inflated and well fastened on. Rim cutting results from keeping them too soft, and if allowed to get soft and loose on the rim, they creep, tearing off the lugs and valve stem. Washing the wheels with water tends to loosen the tires from the rims, and to rust the rim interior. Time and the grind of the roads both loosen the tires from their rims.

"Sometimes a good tire, which has been punctured and imperfectly repaired, will have a "pinhole" or thread leak, and upon being immersed in water will show a thousand small leaks all over the cover. The layman usually pronounces this a porous tire, a phrase the tire trade does not recognize. To cure this thread leak, find the main leak, for you have in it the source of trouble. Repair that properly and the myriad bubbles no longer appear.

"The two worst forms of puncture are where two walls of the tire are punctured through to the rim, and where that is a long slanting puncture through from two to four inches of the tread before passing to the inner wall. Such holes cannot be plugged, but must be vulcanized."

Room for Scientific Research.

There are many points which college laboratory work might be expected to elucidate. One which naturally suggests itself is that of the efficiency of the various forms of transmission devices now in use. Almost every user of a motor vehicle has speculated vainly upon this point, and has wondered what proportion of the net power of his motor is actually transmitted to the road wheels.

Careful dynamometer tests upon actual ve-

hicles, representative of various types and makes, would give a clear idea of what the common practice is in regard to the proportion of power sacrificed in transmission, and would throw some light upon the relative value of different forms of speed-changing devices and their modes of connection to the driving wheels. The internal combustion engine has already received considerable attention in these laboratories, and data of extreme value have been the result. Most of these tests, however, have been conducted upon stationary engines, and hence are of somewhat restricted application to the engines of motor cars. Data upon the actual efficiency of high-speed motors are almost unobtainable, so that some experimental work in this connection would be of considerable service.

If a motor vehicle were equipped with a transmission dynamometer between the driving power and the road wheels, and were run over roads of all kinds, in all weathers, and on all varieties of tires, with frequent careful readings of speed and tractive efforts, a flood of light would be let in on a most interesting and instructive subject. An experimental vehicle equipped with dynamometer springs capable of registering the maximum stresses upon the rear axle when in rough practical use, would furnish data for application in rational axle design, and special tests of steels in respect to resistance to combined bending and twisting would enable a metal of the most fit qualities to be selected for this most important use.

On the Care of Tires.

"Never drive with deflated tires," says a circular issued by a foreign concern. "By doing so you run the risk of having both cover and tube cut on the sides, and in consequence the tire will very soon become defective. Such defects do not always show at once; they are sometimes not noticed for two or three weeks.

"Avoid a brake which acts directly on the tire, as it will shorten the life of the cover. A band, block or rim brake is preferable.

"Take care that no damp gets inside the tire, as it will in time spoil and rot the canvas. Sometimes when a car is being cleaned water gets between the rim and the tire, or it may get through the hole of the valve or through one of the studs which keep the tire in position.

"Before putting on the tire, clean the inside of the rim thoroughly. See that the edges of the rims do not get rusty. If they do, polish at once, and paint or japan them.

"Examine the bolts (or the rivets) which serve to keep the steel rim on the wood rim. See that they are exactly flush with the base of the steel rim, as, should they project or bed too deeply, the air tube might get damaged. These hints, of course, apply in the main to all detachable pneumatic tyres."

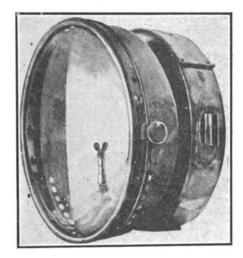
An automobile mail service between San Juan and Ponce, Porto Rico, was inaugurated last week.

LAMPS DE LUXE

Comes From France, Burns Acetylene Gas and has Many Clever Features.

As long as the horse was almost the sole user of the average country road after dark the necessity for carrying lights could scarcely be said to exist. The pace of the horse was slow, and as he made his own going he was usually to be trusted to keep out of harm's way, no matter what he met on his jaunts. But the advent of the automobile has changed things very materially. The pace is faster, the ability to discern other teams or vehicles less, for the horse's instinct counts for more than the man's hearing and seeing faculties. Hence the opportunity of the lamp, and its steadily increasing popularity.

The automobile lamp is apt to be a wonderful thing. Resplendent in its shiny brass



or nickel, it is one of the important fixtures of an up-to-date vehicle.

Acetylone gas lamps are most generally used by automobilists, but some of this type are ill adapted for the purpose for which they are designed owing to their weight, liability to rattle, poorly constructed fastenings, and inaccessibility for cleaning purposes. A new lamp, of which the illustration gives a good idea, has been designed specially for a French firm to overcome the faults apparent in other types of lamps.

It will be obvious at once that the external shape of the new lamp is not only an improvement from an æsthetic point of view, but also that, being free from corners and projections, it can so easily be kept smart and clean.

The hinge on the door at the front is a casting, made very long and strong, and secured by six large rivets as well as being soldered, whilst the pin which passes through it, and upon which the door swings, is tapered so that it cannot possibly get slack and rattle. The old spring catch, which did indifferent duty as a fastening, is now superseded by a small and powerful spring claw which cannot get out of order.

The reflector is of a concave elliptical form, and is very accessible, whilst the glass front is made of very strong plate glass.

The burner is of the ordinary pattern, but, whilst using only the same amount of acetylene as the old type, it is claimed to give twice the illuminating power. The gas generator box is of novel form, being slightly wedge shaped, and the container is so constructed that it is impossible for it to move about, however great the vibration. The gas itself is passed through an improved filter made of cane, which prevents any possibility of the burners becoming choked.

Perils of the Beach.

It will probably be some time before chauffeurs learn by experience that the ocean beach is not a suitable place on which to run an automobile. The smooth, white and apparently hard surface of the beach presents a tempting prospect to the automobilists and they head their machines for it. Some of them manage to reach it, while others get stuck in the soft sand intervening. At Long Beach, L. I., a few days ago, a big automobile got stuck fast. Finally planks and ropes were obtained and the machine was extricated.

Another driver came down in his Panhard-Levassor and likewise tried for the beach. He got there—and stuck. It required the combined efforts of twenty bathers to pull the machine out of trouble.

The bathers, clad in their dripping suits, presented an amusing sight as they heaved and tugged at the long rope that was attached to the forward axle of the machine. They were assisted by the machine's own power. While the men were pulling at the rope the automobile struck a hard bit of ground and made a sudden spurt forward and nearly ran down the two men who were nearest to it.

More Trials at Bexhill.

On August 4 next the Automobile Club of Great Britain will hold a race meeting at Bexhill. In the tourist section there will be six classes, including races for motocycles, steam vehicles and electric cars.

A similar number of contests will be held in the speed section, the classes being as follows: Motocycles, racing voiturettes, light racing cars, racing cars weighing less than 1,000 kilograms, and a scratch race for the fastest vehicle. A handleap race and a competition for appearance will conclude the meeting.

Wet Weather and Tires.

"Tires wear so well in wet weather," says a driver who has given the matter attention, "that an item of considerable expense is spared the automobilist. Rubber cuts more easily, it is true, when wet, but with the thick tires of a motor car surface cuts are unimportant. It is heat which is so ruinous to tires, for not only do hot tires puncture readily, but the heat developed by rapid running and accentuated by high temperatures dissolves our patches and opens old wounds."



The Week's Patents.

703,186. Vehicle. Alexander Clark, Chicago, Ill. Filed Feb. 17, 1902. Serial No. 94,380. (No model.)

Claim.—1. A vehicle consisting of a running gear embracing longitudinal side bars, a box or body supported on said running gear having a reduced part which extends downwardly on said side bars, and the upper or enlarged part of which overhangs said side bars, and means on-said running gear for detaching the box from the running gear and loading the same thereon.

703,374. Mechanism for Electric Propulsion of Road Vehicles. Daniel S. Bergin, Chicago, Ill. Filed Sept. 28, 1901. Serial No. 76.869. (No model.)

Claim -1. The combination with a vehicle of the class described of positive and negative line conductors, a motor and a jointed trolley pole having a contact section arranged to extend horizontally and laterally from the main or supporting pole, beneath said conductors, said horizontal section consisting of two contact portions each adapted to be brought into sliding contact with one of said conductors, said portions being insulated from each other, and means for electrically connecting one of said portions with one terminal and the other with the other terminal cf said motor, whereby said contact portions may be removed from said conductors at will and again brought into contact therewith while permitting a considerable lateral variation in the relative position of the vehicle with respect to that of said line conductors.

703,405. Roller Bearing. William G. Griffin, Washington, D. C. Filed Oct. 5, 1901. Serial No. 77,691. (No model.)

Claim.—1. A roller bearing comprising antifriction rollers, a revolving cage, bearing pins adjustably secured in opposite ends of the cage and forming bearings for the rollers, and means for preventing the removal of said pins from engagement with said rollers.

703,408. Rubber Tire. William R. Harris, Akron, Ohio. Filed Dec. 30, 1901. Serial No. 87,708. (No model.)

Claim.—1. A tire comprising a resilient body portion having a groove throughout its inner face and also provided upon each side with circumferential reinforcing bands, said body portion also having a plurality of transversely disposed wires, each wire section being bent upon itself near its middle portion to provide a U shaped loop portion adapted to compensate for said groove, in combination with a rim having a rib fitting said groove, all combined substantially as specified and for the purpose set forth.

703,436. Motor Vehicle. Wilhelm Maybach, Cannstadt, Germany. Filed Mar. 31, 1902. Scrial No. 100,746. (No model.)

Claim.—1. In motor vehicles, the arrangement of a motor surrounded by a protecting box, a water cooler situated in the front wall of this box, and a ventilator situated underneath the chest of the carriage in the back wall of the protecting box, substantially as described and for the purpose set forth.

703,459. Automobile Attachment for Vehicles. John F. Peterman, Indianapolis, Ind. Filed Sept. 3, 1901. Serial No. 74,166. (No model.)

Claim.—1. The combination with a four wheeled vehicle of the kind commonly drawn by horses having wheels revolubly mounted on fixed axles, a fifth wheel, a head block and a reach connecting the head block with the rear axle, of a motor attachment

comprising a frame removably secured to the head block and rear axle, an engine mounted on said frame, a shaft driven by said engine, a cogged ring adjustably attached to the rear wheels of the vehicle by means of U shaped bolts taking into openings in a flange clamped to the hubs of said wheels and into radial slots in the web of the ring, toothed wheels on the ends of the said shaft meshing with the teeth of the rings on the vehicle wheels and means connected with the front axle of the vehicle for disconnecting the shaft from its toothed wheel on the inner side of the vehicle when the vehicle is travelling in a curve.

703,463. Starting Means for Explosive Engines. Samuel E. Poole, Randolph, Ohio. Filed Jan. 25, 1902. Serial No. 91,211. (No model.)

Claim.—In a gas or gasolene engine, in combination, a cylinder and its jacket, a pipe for introducing a cooling medium into the jacket, and a pipe for introducing a heating medium into the jacket.

703,488. Vehicle Axle Lubricator. Daniel W. Smedley, Wilmot. Ohio, assignor of one-half to Albert F. Kanage, Wilmot, Ohio, Filed Mar. 13, 1902. Serial No. 98,001. (No model.)

Claim.—In a vehicle axle lubricator, an axle provided with a groove having located therein oil conveying pipes, said pipes being covered with metal, and leading to and communicating with open slots, and the axle provided with a reduced portion between the bearing points of the hub boxing, and an oil cup provided with a passage leading to the oil conveying tubes, and means for forcing the oil through the conveying tubes from the cup, substantially as and for the purpose specified.

703,490. Storage Battery. Malcon O. Smith, Depew, N. Y., assignor of one-half to Thomas J. Coster, Depew, N. Y. Filed July 13, 1901. Serial No. 68.145. (No model.)

Claim.—1. An element for storage battery, composed of a metallic plate forming a tray with outwardly sloping sides and ends, deepest in the centre along a central longitudinal line, said plate provided upon its upper and lower sides with electrodes of opposing polarity, in conductive connection with the plate by means of a retaining grid of vertically disposed thin laminæ, formed from the body of the plate on opposite sides of its central core to which said laminæ remain united, the outer or marginal portion of the tray being formed by intact portions of the plate and bent upwardly to form a standing rim around the edge of the tray.

703,501. Self-Lubricating Hub Bearing. Theodore Thistlewood, Harrington, Del. Filed Sept. 7, 1901. Serial No. 74,650. (No model.)

Claim.—1. In a lubricating bearing for axles and in combination with the axle and the hub box, a wear sleeve fixed to the axle arm, having an enlarged rimmed end telescoping with the inner end of the hub box, and having a slot or channel extending through its enlarged rimmed end, and pockets on each side of the channel, and a plunger key adapted for insertion into the channel to displace the oil therefrom into the pockets and means for locking the key.

703,511. Oil Vapor Engine. George Wood, Newark, N. J. Filed Feb. 16, 1901. Serial No. 47,699. (No model.)

Claim.—1. In a vapor engine, a pair of independent cylinders each provided with an explosion chamber and a piston, a rotary crank shaft at the closed ends of the cylin-

ders, means for supplying explosive gases to the chambers, electric means controlled by the engine for igniting said gases, a walking beam journalled at the open ends of the chambers and composed of independently movable sections each having an arm connected to one of the pistons and an additional oppositely projecting arm connected to the crank shaft.

703,552. Steering Gear. Walter A. Crowdus, Chicago, Ill. Filed July 19, 1901. Serial No. 68,901. (No model.)

Claim.—1. In a steering gear, the combination with a steering post, of a lock bolt carried thereby, a fixed support, a groove therein adapted to be engaged by said lock bolt and means to advance said lock bolt into engagement with said groove, substantially as described.

703,594. Hand Motor. Paul J. Kamper, Sioux City, Iowa. Filed Apr. 19, 1901. Serial No. 56,600. (No model.)

Claim.-A horizontal shaft secured to the frame of a vehicle adapted to revolve in suitable bearings thereon, a ratchet wheel secured to said shaft, pawls abutting against the teeth of said ratchet wheel, an operating lever pivotally secured in bearings supported by the frame of the vehicle, levers connect-ing said operating lever with said horizontal shaft, said pawls being pivotally secured to the lever connected to said shaft, the end said connecting lever freely encircling said shaft, in combination with chain wheels firmly secured to said operating lever, chain wheels freely encircling said horizontal shaft, said last chain wheels having ratchet clutches adapted to enmesh with ratchet clutches secured to said horizontal shaft and adapted to slide thereon, springs for pressing said ratchets into engagement with each other, chains connecting the wheels on said horizental shaft with the wheels secured to said operating lever, and means for imparting the motion of said horizontal shaft to the axle of the vehicle when the shaft is turned, substantially as described.

703,649. Self-Propelled Vehicle. Edwin R. Gill, Englewood. N. J. Filed Nov. 11. 1899. Renewed Nov. 15, 1901. Serial No. 82,411. (No model.)

Claim.—1. As an article of manufacture, a vehicle wheel and a rotary motor having its rotating part carried on said wheel and its fixed part supported on said wheel in fixed rotary relation to said rotating part.

2. As an article of manufacture, a vehicle wheel and a rotary motor having its rotating part fixed to said wheel and its fixed part supported in ball bearings by said rotating part.

703,673. Electric Battery and Mounting Same. Elmer A. Sperry, Cleveland, Ohio, assignor, by mesne assignments, to National Battery Co., a corporation of New Jersey. Filed Sept. 13, 1899. Serial No. 730,320. (No model.)

Claim.—1. In a receptacle for a battery, free electrolyte within the receptacle, the walls of the case extending above the electrolyte and being provided with an inwardly and downwardly overhanging lip at or near the upper edge of the case with a free space between the lip and the wall.

703,674. Connection for Batteries. Elmer A. Sperry, Cleveland, Ohio, assignor, by mesne assignments, to National Battery Co., a corporation of New Jersey. Original application filed Sept. 13, 1899, Serial No. 730,320. Divided and this application filed Nov. 6, 1899. Serial No. 735,971. (No model.)

Claim.-1. In a battery, a case having its

walls formed of thin conducting material, an electrolyte within the case, said case being provided with an extension projecting above the electrolyte, said extension being thicker than the walls of the case and being provided with a terminal having a broad contacting surface, and an insulating support for the walls of said case.

703.724. Explosive Engine. George Gibbs, Canon City, Col., assignor to Spencer H. St. John and S. Vernon St. John, Canon City, Col. Filed Aug. 1, 1901. Serial No. 70,562. (No model.)

Claim.—1. In a gas engine, the combination with a motor of a pair of operatively connected reversely rotating momentum wheels, and means for connecting the two wheels in alternation with the motor. 2. In combination with an explosive en-

2. In combination with an explosive engine, a shaft driven by the engine, a pair of opp sitely rotating momentum wheels loosely mounted upon the shaft, and means for connecting the momentum wheels with the shaft in alternation.

703,759. Electrical Sparking Device. Alfred C. Brown, London, England. Filed Dec. 21, 1901. Serial No. 86,763. (No model.)

Claim.—1. The combination with a sparking plug having a metallic body through which one of the electrodes passes, of a tubular condenser comprising two metallic tubes one of which is in immediate metallic union with the body of the plug while the other is contained within the first and is in direct connection with the wire or conductor terminating in the other electrodes of the device.

703,769. Motor Vehicle. George E. De Long, New York, N. Y., assignor to the Industrial Machine Co., Phoenix, N. Y., a corporation. Filed Feb. 25, 1901. Serial No. 48,650. (No model.)

Claim.—1. In a motor cycle the combination with a suitable motor, of a frame having two or more hollow sections, a receptacle for the fuel supply of the motor formed in one of said hollow sections, and a carburetter and igniting devices for the motor located in another of said hollow sections of the frame, substantially as described.

703,844. Running Gear for Motor Vehicles. Francis J. Stallings, Effingham, Ill. Filed Aug. 31, 1901. Serial No. 73,992. (No model.)

Claim.—1. The combination with a shaft or axle and a wheel mounted loosely thereon, the wheel provided with a rim on one of its faces, of an individual clutch band surrounding and continually supported by the rim, movable means located on the shaft or axle, a pair of jaws engaging the clutch band, the jaws pivotally supported on a bracket, the bracket being independent of the clutch band, the movable means adapted to engage the jaws whereby the clutch band is tightened upon the rim.

703,860. Expansible Pulley for Motor Vehicles. Paul I. Viel, Paris, France. Filed Apr. 10, 1901. Serial No. 55,157. (No model.)

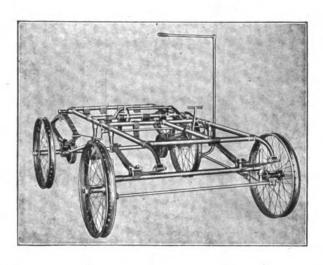
Claim.—1. A transmitting and speed gear, comprising the motor shaft a, the disk b carried by said shaft, and having grooves d formed therein, the sectors e adapted to slide within the said grooves, said sectors being arranged to receive a transmission belt coupling the driving shaft to the driven one in order to vary the speed of the latter, chains f connected with said sectors, rods h connected with the chains, supports n carried by the shaft, rollers m mounted to revolve on said supports between the sectors and adapted to receive the belt when the sectors are retracted, and a shifting device for the sectors connected with the said rods.

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F. W. Stockbridge, Paterson, N. J.
Day Automobile Co., St. Louis and Kansas City, No.
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Gear and Sector Patent.

The Patent Office at Washington has just granted the application of II. P. Maxim and II. M. Pope, assignors to the Electric Vehicle Co., for a patent on what is known as the gear and sector arrangement in the construction of automobile steering connections. The patent was filed on June 12, 1897, and its claims are quite broad. It is stated that the special construction covered has been copied abroad to a considerable extent.

The principal claims are as follows:

In a vehicle, the combinat ion of a spring suported body, a steering shaft and back lock transmitting mechanism mounted upon said body, a running gear frame, wheels pivotally mounted to oscillate with respect to said frame, and positive, but flexible, connections between said back lock transmitting mechanism and said wheels.

In a vehicle, the combination of a spring supported body, a steering shaft and back lock transmitting mechanism mounted upon said body, an axle relatively movable in a vertical plane, wheels pivotally mounted to oscillate with respect to the axle, and operative link connections between said back lock transmitting mechanism and said wheels having joints capable of movement in different directions whereby positive action is secured with flexibility to accommodate the relative movements of the body and axle.

In a vehicle the combination of a spring supported body, a steering shaft and back lock transmitting mechanism mounted upon said body, an axle relatively movable in a vertical plane, wheels pivotally mounted to oscillate with respect to the axle, a vertical arm secured to said back lock transmitting mechanism and connections between said arm and said wheels including links and levers connected by joints capable of movement in different directions whereby positive action is secured with flexibility to accommodate the relative movements of the body and axle.

In a vehicle the combination of an axle, a body spring supported with reference to the axle, a steering shaft having a skew gear at its lower end, bearings for said shaft mounted on said body, a gear sector also mounted on the body in mesh with said skew gear, a substantially vertical arm connected with said gear sector, a substantially horizontal link connected to said arm, a second arm connected to said link and substantially at right angles therewith, stud axles pivoted on said axle, and operative connections from said last named arm to said stud axles.

In a vehicle the combination of an axie, a body spring supported with reference to the axie, a steering shaft having a skew gear at its lower end, bearings for said shaft mounted on said body, a gear sector also mounted on the body in mesh with said skew gear, a substantially vertical arm connected with said gear sector, a substantially horizontal link connected to said arm by a joint having freedom for movement in different directions, a second arm also connected to said link by a joint having freedom of movement in different directions and substantially at

right angles with said link, stud axles pivoted on said axle and operative connections between said second arm and said stud axles whereby said stud axles are moved together but through different angles.

Long Island Cups Given Out.

Who said anything about cups? The Long Island Automobile Club is revelling in them at the present time. It has had made and is sending out those won last autumn on the Coney Island Boulevard, as well as those awarded to the winners of the Roslyn Hill



climbing contest in April. The one given to the winner of the steam class, the Locomobile operated by J. M. Page, is shown herewith. The other three, for different gasolene classes, bear a strong resemblance to the one depicted.

Has a Warming Up Spin.

Apparently the new Winton racer, from which so much is expected, can justly lay claim to a title to its name, "The Bullet." It was given a warming up spin last week at Cleveland, where, on a new and as yet unfinished road, it is credited with having reeled off seven-eighths of a mile at the rate of 0:51 1-5. On a better course it is confidently expected that all existing records will be at its mercy.

The car is a radical departure from all previous Winton constructional methods. It is of the foreign type, yet distinctive, as all Winton designs are. The engine has four cylinders, and is placed in front. The wheel base is extremely long and low, and the rider sits very far back.

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Members to be allowed to send one standard carriage each.

A representative of the Association to be in charge of the American exhibit.

The machines to be shipped from New York to London and back in one consignment, so as to obtain the lowest freight and insurance rates.

Exhibitors to bear total expenses in pro-

portion to the weight of their carriages.

Any member that may not wish to share in the Association's space will, of course, be at liberty to exhibit independently.

It wil be remembered that England offers the best foreign field for the sale of American machines, as there is no import duty imposed.

A large exhibit in London under the auspices of the National Association of Automobile Manufacturers would no doubt be of great benefit to its members, and the cost under the above plan would be minimized.

The prospectus of the exhibition has already been issued, so that prompt action is necessary.

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In the Speed Trials on Staten Island Boulevard, May 31st, one of the Prescott's that made the Endurance Run, a regular stock machine, nothing special on it made the mile in 1.37 1-5, thus proving conclusively that the Prescott statement of the Prescott's that made the mile in 1.37 1-5, thus proving conclusively that the Prescott Statement of the Prescott Statement In the Speed Trials on Staten Island Boulevard, May 31st, one of the Pres on it, made the mile in 1:37 1-5, thus proving conclusively that the Pres cott are safe, speedy and reliable.



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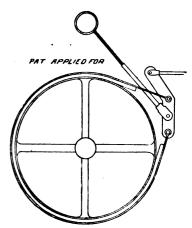
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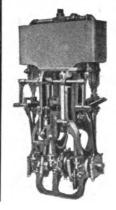


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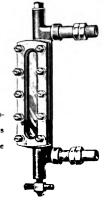
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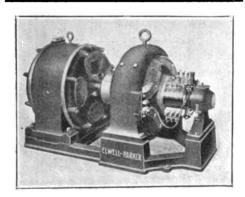
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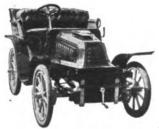


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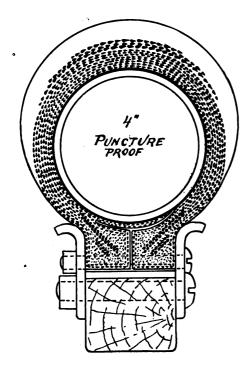
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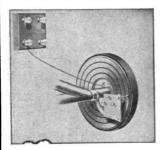
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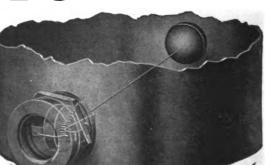
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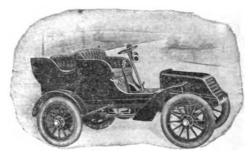
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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, July 17, 1902.

No. 16

AUSTRIAN ROADS WROUGHT SAD HAVOC

Carefully Laid Plans of Makers Set at Naught by One Day's Ride Through Mountainous
District—Heavy Class of Cars too Light to Stand the Strain—Bennett Cup
Race Tortoise and Hare Affair, in Which the Tortoise Won.

French Bureau Motor World,

2 Rue d'Abbeville.

Paris, June 30.—No automobile event has ever been so full of interest and incident as the race from Paris to Vienna, and none has offered such a perpetual series of surprises and unforeseen results. It was the unexpected that happened from the beginning to the end.

Now that we come to consider the race after the event, the only matter for surprise is that this failure of prophecies and collapse of anticipations were unexpected at all. In the first place, we had a number of entirely new types of vehicles, nearly all of them finished a few days before the race, and they had certainly not been tested and the final touches given which make all the difference between failure and success; and on the other hand the event took place under the most difficult and perilous conditions that could possibly have been conceived by the organizers of a race.

Just imagine vehicles being brought down within the weight of 2,200 pounds and propelled by engines of 60 and 80 horsepower which sent a perpetual and appalling strain through every fibre of the light vehicle, seeking out each little defect, weakening defective pieces of steel and working them mercilessly until they broke and resulted in an irretrievable panne. It was a ceaseless struggle between a powerful motor and a vehicle built to give the narrowest margin for exceptional strains, and though the carriage might have a good chance of coming

out victorious on well made roads, it was perfectly helpless during the steeplechase over the mountains between Bregenz and Salzburg. This experience will long live in the memories of the drivers as a nightmare. To parody the phrase of a French general, it was magnificent, but it was not racing. It is a wonder not that the road was strewn with so many wrecks, but that such a large number of vehicles succeeded in reaching Vienna. The makers of the successful carriages can well say that they have done what has never been achieved before.

The race was run off in three stages, while on the second day the vehicles traversed Switzerland from Belfort to Bregenz as tourists, the promoters having considered that it was inadvisable to ask permission from the government to race, in view of the short time available for carrying out arrangements. The distance from the start at Champigny to Belfort was 253.3 miles. Of the 214 vehicles entered 137 were started from Champigny, and never before had a race brought together such a huge crowd of spectators. Champigny is a suburban town to the east of Paris, and as the first lot of racing machines were to be sent off at 3:30 in the morning many thousands of spectators had to proceed there over night, most of them taken down by the last trains, while cyclists and automobilists kept up a perpetual stream of traffic. What can have possessed the opponents of automobile racing to say that the sport is not popular? Its popularity was simply colossal. All the way up the long

hill leading to the plateau numbers were fixed up on the lines of trees to mark the places of the vehicles, the Gordon Bennett Cup competitors being, of course, ahead.

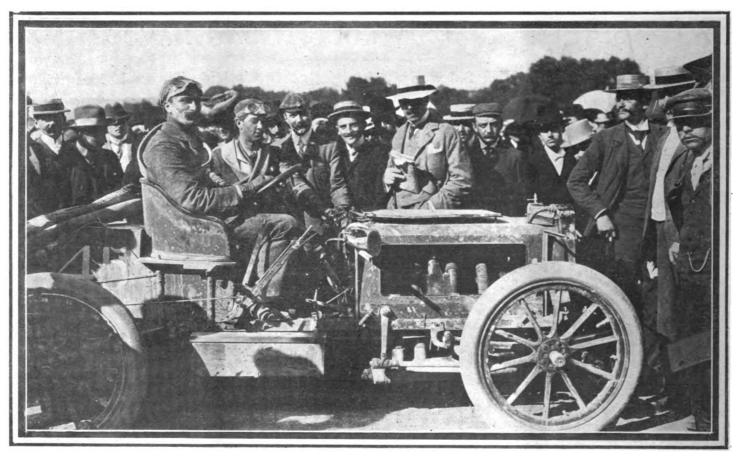
Three vehicles of the Wolseley Tool and Motor Car Co., of Birmingham, had been entered by the Automobile Club of Great Britain, but only one turned up, driven by Mr. Austin, but he apparently had no idea of competing for the cup, for the Wolseley was sent off a long time afterward with the other vehicles. The place of the Wolseley was taken by S. F. Edge, who had a new Napier of 30 horsepower, driven by a shaft instead of the usual chain, and with direct drive on the top speed. Considering that he was competing with cars of 60 and 80 horsepower, Edge appeared to have very little chance of winning the trophy; but as events turned out the low power of the Napier proved its salvation. While the French vehicles were engined up to their full limit, the Napier could have been fitted with a much more powerful motor, since the weight of the vehicle was only 1,792 pounds. It travelled slower than the French automobiles, but, being more solidly built, it was able to go further.

We accompanied the race in the special train, which, for once in a way, kept faith with the passengers and by traveiling each night landed them at the different stages in ample time to see the arrivals. Starting from Paris at a little before 3, we were given an hour at Champigny, just time enough to go and see the vehicles and come back again.



The sight was a really impressive one, and nothing could give a more striking idea of the power of automobilism than the interminable line of racing monsters, each with unknown potentialities and only waiting for the turning over of a lever to send them flying through the country at express speeds. First the Gordon Bennett Cup vehicles were sent off, Girardot, on his new C. G. V. racer, opening the procession, followed at intervals of two minutes by Henry Fournier on his Mors, Edge on his Napier, and Chevalier Réné de Knyff on his Panhard. The last ramed was running with alcohol and competing for the alcohol cup offered by the Prince d'Arerberg for the first vehicle reach-

had not gone many miles when something went wrong with his C. G. V. vehicle, and thus the only two French carriages left in for the cup were the Panhard and the Mors. At Chaumont the train stopped for a few minutes, when a rush was made for the control outside. Fournier had passed through only a few minutes previously. By working out his times we found he had been travelling at such a high rate of speed that it was clear there was some mistake, probably in the neutralized times, but we were scon able to see for ourselves that he was doing something marvellous in the speed line. The road now skirted the railway, and the fist sign we had of the approach of overhanging with a cloud of dust, and an immense crowd was peering after a retreating vehicle. The road which had been to the left was now on the right, and was again following the railway, not more than fifty yards away from the line. It was still enveloped in dust, and all the passengers were eager to witness what promised to be the remarkable sight of an automobile and a special express fighting out a speed battle at close quarters. The engineer of the train was on his mettle. The express swayed and shook as it swung around corners and flew along the straight stretches. The dust got thicker, and then, as the special thundered past, the Mors stopped and Fournier threw



EDGE AND HIS NAPIER.

ing Belfart with this spirit. When the Gorden Bennett Cup competitors had been sent off the other vehicles were started at intervals, and it was nearly 8 o'clock when the last automobile left Champigny.

The special train had an advantage over the automobiles in the sense that it was able to go right through to Belfort with only an occasional halt, while the automobiles had to lose more than two and a half hours in the neutralized towns which they passed through, preceded by cyclist pilots. During the first sixty miles it really seemed as if, notwithstanding this loss of time, the automobiles would keep ahead of the train, and at the first halt we were informed that three had gone through the control, Fournier leading, with De Knyff and Edge some distance in the rear. We then got the news of the first breakdown, for it appears that Girardot

aut mobiles were the immense crowds at the controls, and the dust that hung in the air showed that Fournier was not far ahead. The special was going very fast, and as it dashed through a station Fournier was seen emerging from the town, and for some time there was a neck to neck race between the two. The Mors simply flew between the lines of trees, with a long cloud of dust in its wake. Fournier was evidently going faster than the train, and in a few minutes he was leading, and then the road turned off and Fournier rapidly dwindled away in the distance until there was nothing but a speck of dust to show his presence. Seeing that he was making a long detour, it appeared as if we should have little chance of getting a view of the Mors again; but at Troyes another surprise was awaiting us. The road, passing under the railway, was

up his arms in despair. It was dramatic and disappointing. We hoped at the time that it was merely a punctured tire, but unfortunately we found out afterward that the engine shaft was broken, and Fournier never got any further in the race.

At Belfort the whole town was in a fever of excitement. It was hot and dusty, and got hotter and dustier all the way to Vienna. The control was on the top of a slight gradient a little way out of the town, and the arrangements carried out by the automobile clubs and the police were perfect, quite different to what was to be experienced later on. The French have g t experience in the organizing of automobile races, and in this they have an immense superiority over other European countries. At about a quarter to 11 the bugles sounded, announcing the approach of the first vehicle, and two min-

utes afterward Réné de Knyff came dashing to the control. His time for the full distance was 7:11, including 2:38 of neutralized times in passing through the towns. He won the alcohol cup, and seemed to have a good chance of winning the Gordon Bennett Cup, for his only competitor, Edge, was a long way behind. About twenty minutes afterward the second man, Henry Farman, came in, also on a Panhard, but his racing time was only a minute and a half more than that of De Knyff. Then followed Maurice

ing there so long as they had no trouble with their vehicles, but a stoppage on the road was fatal to their chances. All sorts of rumors were affoat of serious accidents, some of them fatal, but it turned out that they were much exaggerated.

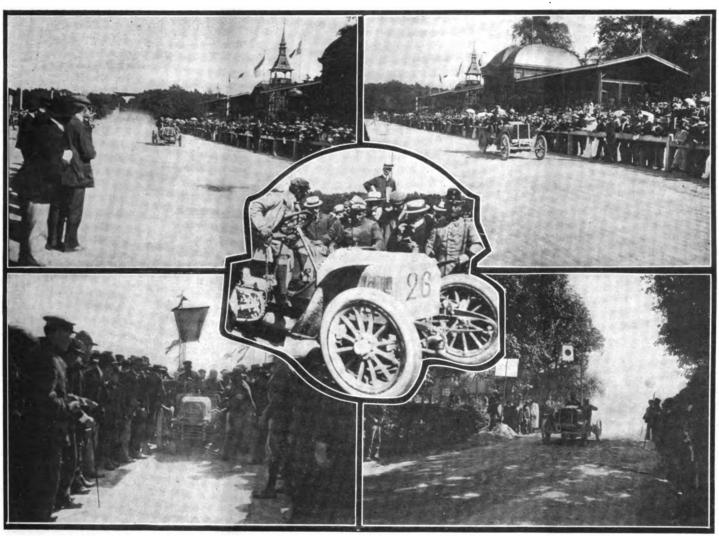
The driver of a Gobron Brillié vehicle was said to be killed, but, though the automobile was smashed up, the man escaped with rather serious injuries. Nevertheless, the owner of a private carriage was upset and killed, but this had nothing to do with the

speed there is a chance of his being crushed under the vehicle. There is all the difference between being thrown out clear of the carriage or of falling underneath.

The second day, from Belfort to Bregenz, was merely a promenade through Switzerland. The special accomplished the journey during the night, when the passengers passed through the magnificent scenery in the oblivion of their sleeping bunks, but the arrival at the Austrian town at Bregenz, at a corner of Lake Constance, helped to com-

ARRIVAL OF THE DECHAMPS

ON THE TRACK AT VIENNA.



SPECTATORS AT SALZBERG.

Farman, C. Jarrott, Pinson and Teste, all on Panhards, and then Louis Renault turned up on his voiturette. Edmond on a Darracq. Count Zborowsky on a Mercedes, Baras on a Darracq running with alcohol, Edge on his Napier, he having lost nearly a couple of hours with his tires, and the next was De Caters on a Mors. Altogether 103 vehicles arrived at Belfort, thus leaving thirtyfour stranded on the road. Most of the accidents were caused by the dust, which was so thick that it was impossible for one vehicle to pass another, and Jarrott declares that he was obliged to retreat out of the dust each time he tried to pass Henry Farman. Those ahead had no difficulty in keep-

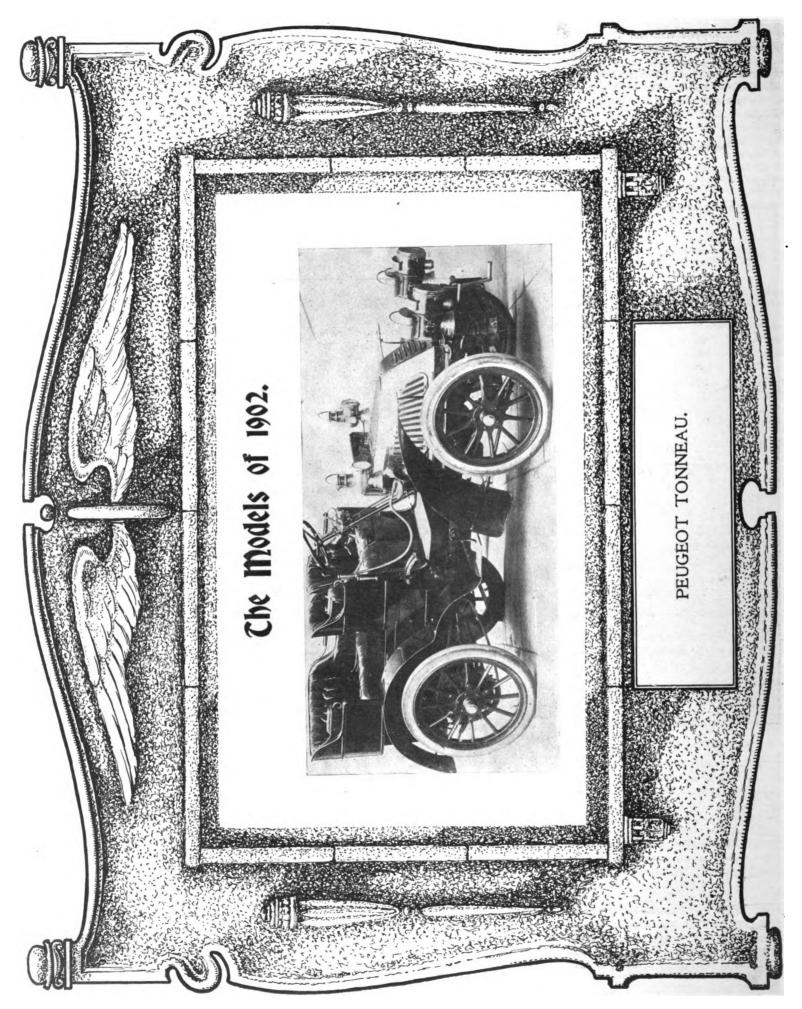
COUNT ZBOROWSKY LOOKS AROUND

race. The Hon, C. S. Rolls drove his Mors into a tree and was cut about, and another vehicle dashed through the gate of a level crossing as if it were made of cardboard. A train which was approaching had to be stopped. The first day's racing was a great success, simply because it was got through without any serious damage to the competitors and none at all to the public; but the way in which carriages were smashed up shows that there is a good deal of truth about the proverbial luck of the racing automobilist. When a racing machine is going at full speed the impact of collision is enormous, but the driver usually manages to land on his feet, whereas if going at half the

H. FARMAN REACHES BREGANZ

pensate us for having missed one of the most picturesque parts of the journey. Bregenz was entirely given up to the automobile race. The town was decorated with flags, and the event was evidently made a holiday. As the automobiles were to travel through Switzerland within the legal limit of speed and be controlled at the different towns to avoid undue speeds, they were not expected to arrive until the afternoon, and it was after 2 o'clock when M. Réné de Knyff arrived at Bregenz, followed by the other vehicles in much the same order in which they had left Belfort. All the population were out to see the automobiles, and it was

(Continued from page 464.)





Published Every Thursday

Bv

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING. 154 Nassau Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Paris Office, 2 Rue d'Abbeville,	:	•	R. P.	COLLINS.
Subscription, Per Annum [Postage				. \$2.00
Single Copies [Postage Paid] .				10 Cents
- • • • • • • • • • • • • • • • • • • •				\$3.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to Thr Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the facilities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649. Cable Address Motorworld.

Entered as second-class matter at the New York, N. Y. Post Office, November, 1000.

Picayunish Practices to be Rebuked.

NEW YORK, JULY 17, 1902.

For picayune practices, calculated to bring the majesty of the law into disrepute and to render those intrusted with its enforcement ridiculous, commend us to District Attorney John P. Niemann and his little band of followers in Nassau County, this State.

By their actions they have gone far to make the practices complained of seem respectable and dignified by comparison. Reckless and utterly indefensible speeding may have been indulged in by automobilists; nay, we will admit that it has been; but to resort to such methods as those so widely chronicled in the daily press during the past couple of weeks is to make bad worse, and to "hold up" the innocent along with the guilty, the lambs with the wolves.

There is, or should be, moderation in all things. In the Niemann campaign it is just as much in evidence as it is in the doings of the owners or operators of the "Red Devils" about which we hear so much, and

that is not at all. If the latter go to one extreme and should be brought up with a sharp turn, as is unquestionably the case, the District Attorney should be accorded the same treatment, for he has erred even more deeply.

As if it were not enough to prostitute the law by making its administration a laughing stock, defiling it to make a rustic holiday, he has conducted the whole matter in an illegal manner.

Almost without exception the arrests made and the fines levied were without warrant of law

The courses so carefully laid out were, it is true, within the village limits; but they were not in the built-up portions thereof, and were therefore expressly set aside from the operation of any eight-mile-an-hour law under which the arrests may have been made.

The law in question, the Doughty law, passed by the legislature in the spring of 1901, contains this explicit declaration:

"No ordinance, rule or regulation adopted by the authorities of any municipality shall require an automobile or motor vehicle to travel at a lower rate of speed than eight miles per hour within any city, town or village of the State in the built-up portion thereof, nor at a lower rate of speed than fifteen miles where the same are not built up."

The arrest and conviction of men adjudged "guilty" of the heinous crime of driving motor vehicles at a speed in excess of eight miles an hour is thus not only repugnant to common sense, decency and justice, but it is also in direct violation of the law. And even a district attorney of Nassau County must admit that he is bound to abide by it.

It is true that there is a contention that the Cocks bill, passed by the last legislature, supersedes the Doughty law referred to. But this contention has little to support it, and is hardly urged seriously.

The best legal opinion is that the Doughty law is still in full force and effect. If this is upheld the Nassau County official is left without a leg to stand on, and he and his confederates in the bucolic comedy that has been enacted on the Merrick Road are placed in an unpleasant and unenviable position.

Here is an opportunity to strike a blow at the pestiferous Niemann. Who will be the first to play the part of St. George to this rustic dragon?

The American Motor League is already astir. It stands ready to fight the case of

any of its members who may be molested, and has made a preliminary move that will almost certainly lead to the challenging of the arbitrary stand taken.

Who Can Now Deny its Popularity?

A remarkable feature of the European races of last month was the wonderful and undeniable interest, even enthusiasm, everywhere displayed.

Across half Europe, from Paris to Berlin, the nigh two hundred racing cars sped almost between living walls of sightseers. In the cities, towns and villages the populace gathered in great numbers; in the country it was seldom that a sprinkling of the curious minded was not in evidence. Furthermore, they were there to cheer and to wish the racers godspeed, and this task they performed with a right hearty good will.

There has been so much said against road racing, so many assertions made that it is unpopular as well as unnecessary, that this outpouring must be a real solar plexus blow to some of the critics of the sport.

If they were right, the dashing heroes of the goggle and peaked cap would have met with a vastly different reception. A frowning countryside would have greeted them, a criticising, an impeding and a curse-shrieking peasantry. Instead of this there were good Samaritans wherever there was a disabled man or motor.

Who shall say, in the face of all this, that road racing, much less speeding of any kind, should cease?

Its strenuousness, occasionally its danger, is not to be denied. But as long as man has to wage the battle for existence, as long as the love of sport remains implanted in the human breast, just so long will such events as that under review be carried out.

And all this is entirely apart from the good that is done to improve the breed of the automobile.

That has its part, and no unimportant one. The beneficent influence of the Paris-Vienna race will be speedily felt, not only in France, but throughout the world. The lessons learned there will be digested and bear fruit.

Why Weights Were Cut.

It is interesting to recall the incidents which led up to the placing of a weight restriction on racing cars eligible for such races as the Paris-Vienna, the Paris-Bordeaux, etc., and which thus brought about the unexpected results of the recent race.

After the races of last year it became evi-



dent that unless something was done to check the building of heavy cars the matter would soon pass all reasonable bounds. There had been a jump from 25 and 30 horse-power vehicles, such as had been used in the 1900 races, to the 60's and 70's, and even 80's, which carried off the honors in 1901. This tremendous increase in power was, of course, accompanied by a corresponding increase in weight. No effort was made to keep it down. Starting with the motor, metal was added with a generous hand. The underframe next came in for a like strengthening—and weighting—and so on throughout the entire car.

All this resulted in the production of veritable monsters. The difficulty of finding tires to stand up under them was greatly increased, the storage facilities were more severely taxed, the roads came in for more severe usage, and the dangerousness of the cars was raised to a point where there seemed to be small chance of escape for anything that got in the way.

Things were bad enough as they were; but it seemed certain that they would be much worse this year.

This being so, the Automobile Club of France set to work to grapple with the matter, and it was not long in coming to a decision. Through its Sports Commission it fixed the maximum of cars eligible for the 1902 events at 1,000 kilogs.—2,200 pounds.

This settled the matter. No objection was raised to the edict thus given forth. Each maker was satisfied—nay, relieved—to call a halt in his own case if he could be at once assured that his competitors would also call a halt.

Need for Care and Tidiness.

It is the custom for automobilists to carry with them a reasonably complete repair kit in their peregrinations; and frequent are the occasions upon which they are made use of.

What automobilist, however, is there who has not found himself unprovided with just the article that he needs the most? Without it he is almost helpless. Try as he will be cannot supply its place. Then comes the resolution—too often, alas, ending with the resolution—to safeguard himself in the future.

How many vehicles are there which have in their kits a small vise? Most of them are supplied with a bulkier and heavier accessory, to wit, a lifting jack. But it is a question whether the vise is not needed oftener than the jack, and one would think that its greater ease of carriage would ensure its being taken along.

The mechanician's impedimenta include such things as plyers, screw drivers, hammers, wire, spark plugs, wrenches of every imaginable shape and size, and a hundred other odds and ends that may not be needed for months, but which, when they are, are needed mighty badly. When this happens what a frantic search there is through the box for what the searcher has a sneaking idea is non est! When hope is no longer possible the search is given up; but not until then.

Order in the tool box or bag 's another thing that is honored more in the breach than the observance.

For one automobilist who keeps everything in applepie order there are a dozen who tumble things in, higgledy piggledy, never giving a thought to the careful ordering and arranging of the tools, and yet taking vastly more time to hunt for a reeded tool than would have been necessary to bestow the entire contents properly.

A Dearly Bought Lesson.

From the dawn of time the Alps have been the fatal stumbling block in the path of would-be conquerors. Here and there the greatest men—Hannibal, Cæsar, Napoleon—have grappled with the grim and frowning peaks and come forth from the conflict victorious. But they have been in the minority, and their fame has gone thundering down the ages.

It was these same Alps, it appears, that wrecked the hopes of the heavy brigade of automobilists who, at the end of June, rushed forth from the gay French capital to unite at the almost equally gay Vienna. But when the rollcall came their numbers were sadly shrunken, the best and bravest of the gallant band being among the missing. Words can scarcely express the poignancy of the grief felt—grief shared by those who sent them forth to conquer or to fall, and who had more than a personal stake in the matter.

On the first day things went swimmingly, in spite of the numerous mishaps and forced withdrawals. But these were to be expected, and were rendered doubly certain by the ferocity with which the giants of the automobile world forced their cars to devour space. Even the "sandpapered" roads of France, justly celebrated the world over,

could not prevent these untoward happenings.

But of the melancholy second racing day—Friday's tour through Switzerland not being taken into account—a vastly unterent story is to be told. The graphic story of our French representative, who went over the whole course, lays all bare. That dreadful ride from Bregenz to Salzburg, over snow covered mountains, around frowning precipices, over gullies and ditches, stones and debris of all kinds, with the safety of cars and occupants alike imperilled every minute of the time, is one that will be long remembered.

It is easy to say that this road should have been explored and prepared for by the makers who spent vast sums of money on the event.

Undoubtedly they should have done this, and we cannot help expressing surprise that they did not. But before the event there was nothing heard of such precautions, no warnings sounded. The car that could live on French or German or English roads was considered just the thing for the journey to Vienna. The most surprised men are also the most disappointed—the ones who have to pay for something they did not get.

The lesson is not one likely to be forgotten. Weight cannot be added to the motors and taken from the underframe with impunity; and it is a pretty safe prediction that it will not be done again.

Giving Them a Pointer.

Across the water they are calling for some method of classifying or handicapping racing cars, the idea being, of course, to place evenly matched cars in the same class, and thus insure close and exciting racing.

The matter received attention in this country last year. A division on weight was adopted, and the wisdom of this line of cleavage has been abundantly demonstrated.

It is not perfect, of course. It is still possible to bring together very unequally matched cars, giving one a virtual walkover. But such things as this are usually avoide l. and racing as a whole has benefited vast, by the change.

We commend the matter to the attention of our English friends, who complain of the present condition in their country without seeming to know that such a plan has been tried here and found to work with excellent results. There is no reason whatever why it should not do exactly the same with them.





Of late it has grown to be quite fashionable to erect a road barricade whenever any bucolic or other kind of colicky citizen imagines he has been injured, annoyed or frightened by an automobilist who has procceded lawfully on his way regardless of the opinions of the citizens aforementioned. The barrleading is usually accomplished by the means of a telephone with an irate citizen at the transmitting end and a busybody at the receiving one. When the automobilist reaches the obstruction he is held by it and some rural official, supposed to be of the law, until the irate citizen arrives and makes his complaint. While I am quite well aware that to talk of the law or of the demands of common sense is to waste time in such matters, yet I wonder if the erecters of these barricades ever stop to think what they are doing? Suppose the automobilist, or some other user of the road, was to run into the unlawful obstruction of the highway, do those who constructed it consider what their legal responsibility would be? Suppose the offender was a locomotive in place of an automobile, would even such foolish people as these place obstructions upon its track? In . the eyes of the law an automobile has the same right to proceed upon its way, even if it be an unlawful way, in safety, so far as the public highway is concerned, and no man has any right at any time to place any obstruction upon that highway to prevent its being used by any vehicle, not even an automobile. It would be an excellent thing for some automobilist who has suffered from this new sort of annoyance to bring suit against those responsible for the barricading. Perhaps after the barricaders had paid the piper a tidy sum they might not feel so inclined to continue dancing.

Good roads, like good people, are not nearly as numerous as the other kind.

Just a small sermon on a debt the automobilist owes. Man still lives in a fever of unrest. He continually seeks to find diversion and at the same time couple with his hours of pastime the ever present element of business. The horse and carriage were available for this purpose, but the horse has his limitations, and they are not great. He requires constant attention, feeding and expensive keep.

The bicycle came, and it promised to end the days of the horse, but the animal is still with us; and from the pleasure vehicle, as it was first, the bicycle has become almost a purely commercial factor, and fills an important niche from which it can never be displaced. Cycling is no longer a craze, and the bicycle will continue to be used as a reliable vehicle for reaching points off the given line of travel, and for "runabout work"

in the city and country, where the horse would be but a cumbersome and slow medium of transportation even under the most favorable circumstances. But the bicycle performed much in another way, for which it is entitled to the thanks of all thinking people.

It was the bicycle that turned the people's attention toward the betterment of the public highways and the use thereof by vehicles at variance with the accepted ideas of centuries. From the bicycle has come the automobile, a more perfect, advanced and far reaching vehicle than its predecessor, the manumotive one, ever tried to be. The debt the automobile owes the bicycle is one it should be proud to acknowledge, not one it should attempt to deny, as it might do did it unwisely follow the advice of a few narrow minded automobilists whose infliction it is not to be able to see beyond their noses, lengthy though they be.

* * *

"Judge not that ye be not judged." When the inspired writer wrote this he certainly had no idea of either automobiles or editors, and yet so prophetic was his advice that even at this late date is the value thereof made plain. The editor of one of the big Buffalo papers, of a daily which has done its share of scoring the automobile, and adjudging every user thereof a violater of the law and a menacer of the public safety, has been arrested for scorching. What did the editorautomobilist do when he was arrested? Did he follow his own advice and in shame-faced silence pay his fine and humbly accept the policeman's story of how he was breaking clocks, laws, ordinances and what not? No indeed, he didn't; to the contrary, he did exactly what he had ridiculed other automobilists for doing. He said he wasn't going an inch faster than eight miles an hour; and the policeman was trying to show off by arresting him because he was going slow enough to be easily caught, and soforth and soforth. You see it makes a great differen e when you are the patient and not the doctor. The medicine and the treatment you so freely prescribe as the physician seem very different when you are forced to become their taker. Even editors who allow their desire for cheap applause to say things they know are not true some times learn this.

I was an interested spectat r on Sunday of just what a fool a man can be when he finds himself unexpectedly confronted with some of the unpleasant results of his own though:lessness. After a chase which had brought home to him the fact that the day was lot and the pace hotter, a cycle policeman overhauled two men who had been enjoying the pleasure of sending a nice-looking little foreign-built car up Seventh avenue at a gait which, friend as I am to the motor vehicle, I must confess even a Waterbury watch would have found difficulty in ticking off more than thirty minutes while the automobile was covering fifteen miles. The policeman was really very nice about the affair, and with no bluster whatever, asked the owner of the vehicle to accompany him to the station house.

Then right here was where the owner lost his head. In place of doing as he had been asked, and quietly obeying the policeman, who, right or wrong, he must have known he had to obey, the automobilist proceeded to tell the policeman who he was and how sure he was that he had not broken the speed laws or any others. The policeman declined to argue, while the crowd, which can always be counted upon to quickly form on so popular a drive on Sunday, made audible and uncomplimentary remarks concerning automobiles in general, and the one before them in particular. In the end, of course, the policeman had his way, and the automobile was turned stationward by its disgusted and much flustered owner. How much wiser it would have been had he avoided all of the unpleasant notoriety he brought upon the vehicle and upon himself by promptly accompanying the officer in the first instance!

* * *

Despite his worst intentions, "Reggy" Vanderbilt did not break all the Berkshire records, as his press agent had so kindly announced "Reggy" was going to do. As an offset, however, to his misfortunes in not succeeding in breaking anything but his autemobile and his intentions, "Reggy" can console himself with the knowledge that, thanks to his automobilic recklessness on the occasion of the recent Yale-Havard boat race, the enraged citizens of New-London have passed an ordinance which forbids any decent user of an automobile from proceeding through the streets of that city at a speed greater than six miles an hour!

* * *

I have been studying the faces of the successful competitors in the recent Paris-Vienna race, and I find once again it has been proven that whiskers are not productive of success in athletic events. All of those who were prominent at the finish of the great race, including the winner of the James Gordon Bennett Cup, were either smooth shaven or else had their faces adorned with hirsute trimmings not more extensive than mustaches, while bearded competitors, of whom Serpollet and Knyff were excellent examples, strewed the roadsides like animated hair mattresses for the first half of the journey-after that the supply of bearded contestants was exhausted and the race was to and for the un-Essau entrants. Why will bearded men fly in the face of Providence with a world full of just such facts as these staring them in their whiskers?

N. B.—Since writing the above I find that Renault, the winner of the big race and the maker of the fastest time between Paris and Vienna, was bearded up to his eyebrows. This, by supplying the necessary exception, proves my whisker rule to be correct.

THE COMMENTATOR.



FACTORIES UNNECESSARY

Each Automobilist can Build his own Vehicle and Save Time and Money.

If one only waits long enough the most mossgrown and hoary "chestnut" will come to life again. Everything moves in a circle. All one has to do, therefore, is to wait for the desired object, for its coming is certain.

Years ago the world was told how every man could be his own bicycle maker, and by doing so save the multitudinous profits which would otherwise accrue to the bloated bondholders who formed the bulk of the bicycle trade. All one had to do was to buy the necessary parts, either finished or in the rough, put them together, with possibly some slight assistance from the bicycle dealer or repairer from whose mouth you were taking the bread and butter, and there you were. Such a machine looked as well and was as good and cost infinitely less than the factory made article.

Now it is the would-be automobilist who is invited with irresistible eloquence to set up in the automobile business. What splendidly organized factories with ample capital are able to do—if at all—only after years of experimentation and practical work, the plain, everyday citizen can do offhand. How it is done is told by—of all papers—The Times:

"An interesting feature of the rapid progress which is being made in automobiling and automobile building is the increasing number of vehicles which are now being built to the order of individuals or in many cases by their intending owners. All of the essential parts of the ordinary patterns of motor vehicles are now manufactured in large quantities, and complete sets of finished parts, ready to assemble, may be bought of the principal dealers in that line of goods, and may be put together in any well equipped repair shop. Of course, if the entire work of assembling is done to order the expense to the buyer will probably exceed that of the ready made machine; but in case the intending automobilist is handy with tools and gives his own time to the work he can save the assembler's profit, which is a considerable one, besides having the satisfaction of knowing every detail of the construction of the vehicle.

"Of course, the easiest and cheapest vehicle to build is the ordinary light gasolene runabout, such as is generally sold for about \$700, which is not only the most popular, but also the most economical to operate. A complete set of finished parts for a vehicle of this type, including gasolene engine, running gear, with tires, transmission device, tanks, chain, pipes, etc., will cost \$375. To this must be added the cost of the body, which is too bulky to be carried in stock, but which can be built by any carpenter or wagon builder from the working drawings

supplied, and which will make the total cost about \$400.

"If, however, the intending builder has access to an ordinarily well equipped machine shop, and so buys the engine, transmission device and gear in the rough instead of finished, this cost may be reduced about one-half, or to about \$200. Over \$100 could be saved on the engine alone, as the complete castings cost only \$28, while the price of the finished engine is \$135, the difference representing the labor of finishing and assembling the parts.

"A small steam carriage of the runabout type is more expensive to build on account of the more complicated mechanism, and the complete set of parts, excepting the body and the water tank, will cost \$487.50. Almost any carriage builder will furnish the body, and any coppersmith the water tank, and the entire expense of assembling will be about \$550. The usual price of a ready made vehicle of similar type is about \$750. The saving by buying and finishing rough parts would be slight, and probably not much over \$50, as little besides the engine could be bought in the rough.

"For a touring car of the well known French pattern, with low frame and tonneau body, the complete list of parts, excepting the body and tires, costs \$623.25, while the body and tires would cost about \$200, making a total cost of about \$800. The usual price of a complete vehicle of this type is about \$1,200."

To be in the Fashion.

"All persons riding in automobiles either within or without the city limits do so at their own peril unless they carry Oleo-Naphthol for use on cuts and wounds in case of accident. It is a limiment and antiseptic dressing," says an advertisement in the Niagara Falls (N. Y.) Gazette, thus showing that the advertiser is fully awake to the wave of anti-automobile legislation that is sweeping over the country.

An Acquisition for Boston.

Boston is undoubtedly the gainer by the appointment of Charles G. McCutcheon, who has just been appointed manager of the American Roller Bearing Co., of that city. He assumed his new duties last week. Mr. McCutheon is clearheaded and capable, and with his splendid mechanical training and natural capacity for making and keeping friends, ought to prove an ideal man in his present position.

Now the French Club Inquires.

The Automobile Club of France has followed the example of the Automobile Club of Great Britain and appointed a committee to inquire into the suitability and capability of mecaniciens seeking to have their names put on the register.

An advertiser in a daily paper wishes to exchange a \$600 Swiss watch for an automobile, presumably one of equal value.

Over the Mountains to Wheeling.

Probably the first automobile trip over the Blue Ridge Mountains into West Virginia was brought to a successful conclusion last week, when William N. Vance reached Wheeling, having made the run from New York. Mr. Vance, who is a son of John N. Vance, of Wheeling, the multi-millionaire steel magnate, started from the Hoffman House and proceeded to West Virginia by way of Philadelphia, Baltimore and Washington, continuing their route from the capital city by way of the old National Pike, over which in years past celebrities from the West took their way East by stage coach

While they were passing through a Maryland town on the Fourth of July some mischievous boy hurled a huge cannon firecracker into the automobile. It exploded, seriously injuring Vance's leg, so badly, indeed, that the services of a surgeon were required. When he arrived he was feeling much relieved, but his leg is still in a bad condition.

Vance and his companions, in crossing the Alleghanies, had many thrilling experiences and came near losing their lives by approaching too close to the edge of a precipice. Through the dexterity of Schloetter, the chauffeur, however, in driving the car, they were saved from being precipitated hundreds of feet below.

Water in the Charge.

It is said to be incontestible that water as part of the charge in explosion engines reduces consumption and advances ignition. So true is this that in using alcohol the consumption, which in theory is 1.8 times thatof gasolene, becomes in practice no more than 1.25 times as much. And this decreased consumption is due to the presence of water in the spirit. There is here a valuable field of inquiry, and doubtless valuable practical results to be obtained. The probable explanation is that water-gas is liberated by the heat within the cylinder, and water-gas per volume requires for its complete combustion much less oxygen than does the ordinary gasolene charge.

Its Many Uses.

A distinguished military motorist in South Africa delights to tell how he made his tea and soup on the veldt from the hot water in his boiler, ran a searchlight from his dynamo, and exploded mines from a distance with an electric spark generated by the same useful engine of all work.

Some Prussian Regulations.

Under a new Prussian law all motor vehicles must carry on the back of the body a letter and a number in black on a white background and of specified dimensions. The letter denotes the province in which the vehicle is registered, and the number the registration number.



AUTOS DISPLACE PONIES

For Polo Playing With Joshua Crane — How it is Done.

Now it is "auto polo" that bids fair to receive the attention of the wealthier class of autoists. The discovery that a \$15,000 (more or less) automobile can be made to take the place of a \$150 Texas pony for polo playing was made by Joshua Crane, jr., of Boston. At Karlstein, the picturesque polo grounds of S. D. Warren, near Dedham, Mass., Crane, who is a clever all round sportsman and athlete, has discovered an entirely new sphere of usefulness for automobiles.

The automobile variety of polo is not likely, however, to become very popular, as an unlimited number of machines would be required if there was any "riding off" attempted.

Mr. Crane owns a big touring machine, which runs under his management with the agility and handiness of a well trained pony. No machine can stop quicker and make more artistic turns. At Karlstein he gave an exhibition of his skill in running the machine with one hand and making a pretty series of strokes with a polo mallet, knocking the ball the length of the field as cleverly as he could from a polo pony.

At the end of his run he rapped a back hander, and then in a jiffy made a dazzling turn at speed with his automobile, and was on the ball again for a run to the other end of the field.

Mr. Crane also successfully tried some fancy shots between the wheels of his machine, and altogether gave a very remarkable performance.

There was one drawback, however, regarding the strokes which may be used by a chauffeur. On a touring machine it is impossible to make near side strokes, but this might be accomplished on a runabout.

Of course, it takes considerable skill to hit a ball from the driver's seat on an automobile, as the player must reach out over the wheel, and at the same time maintain control of the machine. But Mr. Crane has the trick down to perfection, and never missed a stroke on runs the length of the Dedham polo field.

Chauffeurs are Needed.

There is so great a demand for experienced chauffeurs by owners of one or more automobiles in this city and elsewhere that storage stations and repair shops have been sadly crippled of late for want of competent machinists, who readily secure positions at much larger salaries than they have been receiving for much harder work. As a result there is an opportunity for young men with even the slightest knowledge of automobiles to get employment, and a movement is now on foot to start a school of instruction so as to prepare novices in handling machines and making necessary repairs.

A large number of French and English chauffeurs already have been brought to this country, and many owners of stables who now are abroad have been advised to secure the services of men from abroad, which may have a stimulating effect on American taught chauffeurs, who will be better able to manage American built carriages.

Always Ready to Start,

An English physician living in the country and liable to nightly calls, entailing drives of long distances, has devised an ingenious method for keeping his steam carriage ready for use. In his coach house he has a gas burner, which at night is placed immediately beneath the boiler of his carriage. A rubber tube connects it to a gas pipe in the wall, and the gas is controlled by a tap in his bedroom. Immediately on receiving a call he turns up on the tap, the table of jets beneath his boiler lights to the full, and by the time he is dressed steam is up and his carriage in condition for starting.

How Fournier Took it.

So keenly did Fournier regret the accidents which threw him out of the Paris-Vienna race that he sat down "under a tree in an open plain and bemoaned his fate," as he puts it in a letter to a friend in this city. He had travelled 300 kilometers without being passed by a single car, when a punctured tire and a break in the machinery brought him to a stop. He was unable to remedy the trouble in time to continue with any kind of a chance of winning.

Fournier says the good work of the carriages in the long race was surprising, and the time in general made on the journey, he thinks, shows the automobile to have reached an almost perfect state. He writes of the famine in automobiles, saying that manufacturers are far behind in orders and cannot make immediate deliveries, not even with the inducement of extra high prices,

Motor Cars the Cause.

The road authorities throughout France are considering the effect of automobile traffic on the surface of the highways. They are, according to the bulletin of the Société des Ingenieurs Civils, almost unanimous in the opinion that in their present state the roads cannot support the excess of wear resulting from the new traffic.

The roads, they say, must be enlarged and strengthened. The increased cost of maintenance to which this would lead is estimated at £14 per mile.

It would cost from £120 to £600 per mile to transform the roads to enable them to resist the wear caused by heavy automobiles, the Board of Engineers says.

On the other hand, French expert opinion suggests that excessive wear of the roads may be to some extent avoided by discarding the narrow tires in all cases. Experiments, it is claimed, have also shown that wheels of large diameter are superior to smaller wheels.

RACING IS FASCINATING

But the Popular Demand is for Moderate Priced and Speeded Cars.

A fascinating machine is the racing motor car, and it is small wonder that it takes a firm hold on its devotees, such as is not easily shaken off. It is intensely interesting, a twentieth century marvel, with its driver sitting tight, eye, brain, hand, engines and wheels strained to the breaking point—a veritable modern centaur.

But though all motorists can but be keenly interested in its construction, its development and achievements, only the few desire it for themselves. For the vast majority a handsome, comfortable, well-going vehicle is the thing they ask.

Enjoyment and convenience, not "records," are their aim, and it is to these ends, not to mere pacemaking, that manufacturers are turning their attention. Where, indeed, is the use of the automobilist possessing in his engines (and paying for it) the 40, 90 and 106 horsepower of racers when, with 6 or 10 horsepower, he is able to make as much speed as the law allows him without fining for furious driving.

He needs reserve power for maintaining his pace on rough, impeding roads, for climbing hills, and for little sportive spurts on straight, deserted highways. But a speed beyond fifteen to twenty miles an hour upon ordinary roads of average traffic is dangerous to the driver and to the public, so that a motor of very considerable horsepower is a mere white elephant to a man who has no wish to be a menace to his fellows, but merely to amuse himself.

For these reasons, automobilism being with the majority of us a mere delightful form of recreation, and not a sport, the sanctioning or prohibiting of motor races is a point of insignificance. It will no more affect the industry of that which is styled the domestic automobile than the Sheepshead Bay race meetings affect the sale of baby carriages.

Shanghai may Have Motor 'Buses.

A public transportation system of some kind is about to be established in Shanghai, China, but considerable doubt exists whether it will come in the shape of trolley lines or motor 'buses. It is said that the ratepayers of Shanghai, who correspond to taxpayers here, are opposed to the introduction of the trolley system because they think the roads will be defaced by the laying of tracks. They have accordingly instructed the Shanghai Council to accept bids for an electric omnibus line, like the Fifth Avenue automobile stages, as a substitute for the trolley. There is doubt as to what will eventually be decided upon.

In case of a gasolene blaze up, the use of common road sand speedily subdues the flames.



AUSTRIAN ROADS WROUGHT SAD HAVOC

(Continued from 457.)

very hot, whereat there was a phenomenal consumption of the national beverage, for the Austrians have a very fine belief in alcohol in an innocuous form other than as a fuel for motor vehicles.

The third day's race, from Bregenz to Salzburg, was to prove a very trying test for the racing automobiles. Those who had gone over the course declared that it was practically impossible to race. The road was covered with loose stones, and every hundred yards or so they were cut across with deep ruts or else marked with huge ridges which caused the vehicles to jump and bound when going at any speed. And then to cap it all there was the climbing of the Arlberg, a mountain which two weeks previous was still covered with snow, and the road wound interminably up and down, skirting precipices and offering perpetual pitfalls to the unwary automobilist. M. Clément, the well known automobile maker, opined that less than 50 per cent of the vehicles would succeed in getting to Salzburg. We got some idea of the country as we turned out in the early morning and saw the mountains of the Tyrol on either side of the railroad covered with snow and looking very picturesque, but very ugly as a touring ground for automobilists. The idea of racing through such a country seemed preposterous.

THE COUPE INTERNATIONAL

The Gordon Bennett Cup competition was to be decided to-day by finishing at Innsbruck, which would bring up the total distance to 610 kilometres. The only two vehicles in the race were the Panhard of Réné de Knyff and the Napier of S. F. Edge, but the former had such a big advance that his victory seemed a certainty, barring accidents. At Bregenz Edge told us that while he thought the chances were equal, he would not be satisfied with winning the cup by accident, as he would prefer to get it by the merits of his vehicle; but he can certainly have no compunction on this score, for the Napier has undoubtedly proved itself the better vehicle on this particular road, simply because it was more reliable. If the French makers build light vehicles for roads over which no private automobilist would drive at any speed they must know that they are taking big risks, and they cannot complain at failing to do what is accomplished by a lower powered and more strongly built vehicle. During the first part of the run from Bregenz Edge had a very alarming experience, for when taking a sharp corner he saw a man with a blue flag, indicating caution, and he suddenly put on the brakes. The vehicle slewed round across the road, and, taking the brakes off again with the idea of turning the vehicle round, it fell off the road, where a precipice was waiting for it some hundreds of feet deep. fore Edge could make out what was happening he found himself, still seated in his Napier, gazing up a straight bank to the road above. The vehicle had simply subsided on a ridge thickly covered with shrubs and moss, and it had not suffered the slightest damage. How to get the vehicle back again was a problem that troubled Edge for some time, but eventually he got the assistance of about forty men, who pushed the automobile along the ridge where it graded up to the road.

The crossing of the Arlberg was simply awful. At this altitude the moisture coudensed on the glasses, and, getting mixed with the dust, it was scarcely possible to see, and all the time the automobile was sliding and slipping along the loose stones, which bounded and rattled behind and bombarded the mechanic, whose legs were black with bruises. Edge declares that the road was lined with wrecks, and after leaving the Arlberg and getting on straight, level road he saw a Peugeot smashed to pieces, with the driver lying by the roadside. Further on he passed Réné de Knyff in distress. His differential had broken, and Edge had now only to continue on to Innsbruck to win the coveted trophy.

FRENCHMEN MUCH CHAGRINED.

The victory of Edge was a terrible disappointment for the French automobilists. They are laying all the blame on the Automobile Club for having selected men instead of vehicles to defend the cup, with the result that both Girardot and Fournier drove entirely new vehicles, and the Panhard contingent naturally claim that if three vehicles of this make had been selected the cup would probably not have gone to England. Even now it is by no means certain that Edge will be allowed to carry away the cup, for there is a large section of French automobilists who hold to the strictest interpretation of the rules, and argue that, as Edge got the assistance of men to lift his vehicle onto the road, he is disqualified; but it is hardly likely that the A. C. F. will be so unsportsmanlike as to split straws and refuse to hand over the cup on the strength of a clause which is contrary to the spirit of the race. Now that the cup is going to England, what about the future? The conditions of the challenge are that the race must take place in the country in which it is held, and British automobilists have every hope that they will succeed in getting permission to organize a race for the cup, say, between London and Edinburgh. If not, it is probable that the rules will be modified to allow of racing in other countries.

WIERD TALES OF ACCIDENTS.

Meanwhile the other competitors had been having a bad time on this course, and all sorts of wonderful tales are related of accidents to vehicles, one, for instance, being recorded of a Darracq body coming detached from the underframe, which fell a distance of 500 feet down the precipice, while the body, with the driver and the mechanic, dropped onto a ridge fifty feet down. It appears, however, that while this accident really did happen to the vehicle, the driver

and the mechanic were fortunate enough to jump out on the roal just as the automobile was going over. The incidents on the Arlberg would be enough to fill a volume. At Innsbruck, while half a dozen vehicles were standing in the narrow road, the Mors of Baron de Caters came up at full speed and smashed into the volturette of Louis Renault. breaking two of the wheels. Renault manufactured new spokes and afterward continued the journey, and now claims to be credited with the time taken in repairing his vehicle. This feat of repairing shows wonderful resource, for Louis Renault had to use any wood that came handy.

THE BARON'S GREAT RUN.

If the day was full of surprises, nothing was more unexpected than the splendid performance of the Mercedes driven by Baron de Forest. On the first stage the Baron had lost a couple of hours, and he started twentieth from Bregenz, but if he failed to beat the higher powered French vehicles in point of speed he showed a great superiority in endurance, and, going from start to finish without an incident, he reached Salzburg a long way first. He got a splendid reception from the thousands of people lining the road, where stands had been erected, and it was difficult to say which was the warmer, the temperature or the public enthusiasm. The Emperor of Austria was represented by his brother, the Archduke Louis Victor, and several other members of the royal family and the aristocracy were present. As Salzburg is a great health resort, picturesquely situated on the borders of the Tyrol, everything was done on a big scale, and the reception of the French automobilists in this old Austrian town was one of the most pleasant incidents of the race. On the first day the contest was a triumph for the Panhards, and at Salzburg it was a big victory for the Mercedes, while at Vienna Marcel Renault came right out in front. As we have said, it was a perpetual series of surprises, largely, perhaps, a question of luck, but even with luck they are only the best vehicles which can succeed in such a race. Nearly three-quarters of an hour after the arrival of Baron de Forest, Henry Farman reached Salzburg with his Panhard, followed two minutes afterward by Marcel Renault, and then came Comte Zborowsky on a Mercedes, Edmond on a Darracq and Pinson on a Panhard, Between half past 1 and half past 10 at night eighty vehicles and motocycles arrived at Salzburg, so that, despite the terrible going, there was not much more than 25 per cent of failures. This result was another surprise and a decided triumph for the automo-

AUSTRIAN CLUB WAS UNEXPERIENCED.

It is perhaps a little unfortunate to be obliged to say that the enthusiasm, which had been reaching fever heat up to Salzburg, fell off perceptibly in Vienna, though this may be due to the fact that after going through such a series of receptions and festivities we had been expecting too much,



and, on the other hand, the Automobile Club of Austria certainly did not show any great capacity for organization, simply because, no doubt, it has never had occasion to learn from experience. The regulations were enforced a little too strictly, and quite a number of competitors find that complaints have been lodged against them by the Austrian officials, in some cases because they allowed men to pour water on their hot tires on arriving at the controls. Others are threatened with disqualification because they were not reported at the controls, but the unfortunate competitors declare that there was no one present to time them. They did not even know where some of the controls were. No doubt all this will be arranged, and a little tolerance will be shown by the A. C. F., but already the objections have resulted in some of the competitors losing their places.

The arrival took place in Vienna on the racing track at the end of the Prater, on the outskirts of the city. The arrival was fixed by the Austrian club for a certain hour. and as it was made an exhibition event, with paying entrance, the vehicles were not to finish before that time, and the club therefore neutralized the road from the suburban town of Floridsdorf, so that the automobiles should arrive on the racecourse in the afternoon. The weather was intensely hot, and it is probably for this reason that the crowd did not turn up before the hour fixed for the arrival. To the surprise of the Austrians, who prefer military punctuality, the first came onto the course much too soon, and as there was no one at the entrance to direct the driver he came around the wrong way, and Marcel Renault objected strongly to being obliged to turn back and go around the course the other way before he could be officially timed. In this way he lost about ten minutes. Renault got a splendid reception, for he had already kept close up to the leaders on the previous stages, and it seemed probable that he would be the winner for all classes of vehicles. As the time passed without any other vehicles turning up, the probability turned into a certainty, and it was thirty-five minutes afterward when Count Zborowsky appeared on the track with his Mercedes, a quarter of an hour ahead of Maurice Farman, which seemed to make him the winner of the heavy vehicle class. Then followed three Darracqs, Baron de Forest and three Panhards. Baron de Forest smashed his gasolene tank through jumping over a drain, and he was drawn into Vienna by horses and then hitched on behind an automobile. Up to 8 o'clock in the evening there were fifty-six arrivals, and several vehicles and motocycles reached Vienna during the night and the following morning. It is impossible yet to give the racing times of the vehicles or their respective positions, but so far as concerns the leaders it is probable that the following list is correct: 1, Marcel Renault (Renault voiturette); 2, Henry Farman (Panhard & Levassor); 3, Edmond (Darracq); 4, Maurice Farman (Panhard & Levassor); 5, Zborowsky (Mercedes); 6, Baras (Darracq); 7, Teste (Panhard & Levassor); 8, Hemery (Darracq); 9, Marcellin (Darracq). Count Zborowsky would probably have been first among the big vehicles if it had not been for an objection raised against him at one of the controls, and it is likely that a good many changes will take place before the results are declared officially. The neutralizations complicate a race to such an extent that it is very difficult to work out correct results from the mass of figures sent in from the different controls.

The Automobile Club of Austria have organized an interesting series of excursions and festivities, and there is to be a run to Budapest and an excursion into Bosnia-Herzegovina, in which, no doubt, a large number of the tourists who preceded the race to Vienna will participate. The event has been a great success not only from the point of view of the sport of automobilism, but especially from the lessons to be learned concerning the new developments in the motor vehicle; and we will deal with the behavior of the carriages in another letter.

To Build Special Roads.

According to a more or less veracious New Jersey man, capitalists of that State are seriously considering a new and interesting experiment with automobiles.

It is proposed to build a road between two places in the State where there is considerable travel and establish and run thereon a line of automobiles for carrying passengers. The idea is for the automobile company to own the road, just as a railroad company owns its tracks, and for it to be used exclusively for the running of its passenger machines. They could then go at a high rate of speed without endangering other vehicles, and would make pleasant, and, it is believed, very popular lines of travel.

Paris-Vienna Race Paid Them.

Cable dispatches from Paris state that the French trade is deriving an enormous boom from the contest. It is stated on good authority that the Paris manufacturers have already received orders for 20,000,000 francs' worth of machines.

Their Weight and Power.

It is interesting to learn that the latest Panhard engines, which are nominally 50 horsepower, but which give 70 to 75 horsepower on the brake at 950 revolutions, weigh, including the flywheel, 308 kilogs. An exhaust lift is also provided for releasing the compression for starting.

· Recent Incorporation.

New York, N. Y.—The American Georges Richard Co., with \$10,500 capital, to manufacture automobiles. Directors, Alexander Fischer, A. S. Merrill and N. N. Mason.

Several well attended runs have been taken this year by the Gas Belt Automobile Club of Muncie, Ind.

How They do it.

The stop-watch measured-road epidemic is spreading fast in the East. Even Philadelphia's suburbs have taken their cue from Apostle Niemann, of Nassau County, and are having rare sport with automobilists. This is how they work it:

"Lower Merion and Radnor townships have special automobile policemen. E. S. Woodruff and Jacob Rodenbaugh are the Radnor officers. Their uniform consists of blue knickerbockers and blouse, gray woollen stockings and light flannel shirts. They ride racing bicycles.

"These automobile policemen are the foxiest officials that ever wore a uniform. Their daily tour of duty is one continuous stratagem. How can a policeman or a bystander determine whether a racing automobile is travelling ten or twenty miles an hour? That is the policeman's secret, but he can swear with absolute accuracy to the speed at which a machine is travelling. This is how 'tis done:

"Every automobile detective is armed with a stop watch. At various places along the roads around Philadelphia there are accurately measured distances whose marks are unknown to the automobilists. The officer times the speed of a racing machine between these points, and if he is exceeding the legal speed he pursues on his bicycles and arrests the culprit."

May be the Explanation.

One is forcibly reminded of the old saw about a shoemaker sticking to his last by seeing in the Carriage Monthly, under the heading "Remarkable Endurance," this item:

"The Long Island Automobile Club's 100 mile no-stop endurance contest developed a machine which made 100 miles without a stop."

Horse drawn carriages are not very far removed in many essential features from motor driven ones, but such exhibitions of ignorance as this show why the carriage trade has cut so little figure in the automobile business.

Six Miles or Thirty Dollars.

From Long Branch, with its large "horsey" element, no very great consideration for automobilists was to be looked for. It is not surprising, therefore, that the township authorities of the famous New Jersey resort last week passed an ordinance aimed at motor vehicles. Six miles an hour is the preposterous limit set, and the penalty for exceeding it was placed at \$30 for each offence. Thirty days in jail is the alternative.

An African Convert.

One of the latest automobile converts is King Lewanika, the paramount chief of the Barotse kingdom in Africa. He visited Sheffield recently, accompanied by a small suite, and had his first ride in a motor car, the mechanism of which he insisted on being fully explained to him.



Features for Brighton Beach.

Entry blanks for the forthcoming race meet of the Long Island Automobile Club, to be held at Brighton Beach, N. Y., on August 23, were sent out last week. They contain a list in detail of the ten events, the conditions, etc.

Some features of a startling and sensational nature are promised by the club, details of which will be given from time to time. Entries are already coming in. The competing cars will range from the light, high-powered steamer of the class driven by S. T. Davis, jr., to the ponderous, high speed car driven by Henri Fournier on the Coney Island Boulevard on November 16, 1901, when he lowered the mile record to 51 4-5 seconds, a point never yet equalled for the distance.

The exciting character of the events can best be realized when it is understood that in more than one event cars of various motive power are privileged to compete one with the other. The final heat of the first event should see cars of various classes whose weight is not more than 1,500 pounds pushing each other to top speed.

The requisites for an automobile speed contest, while few, are necessarily important. These requisites comprise, first, a cool headed driver; second, a car with ample power and safe construction; third, a track of sufficient width, well banked, and having a roadbed that is neither too hard nor too soft. The owners of speedy automobiles supply the first two requisites and the Long Island Automobile Club will supply the third on August 23, when the Brighton Beach racetrack will be used for the first series of automobile track races to be held in the vicinity of New York.

Not for Automobilists.

Apparently even guests, if they come in automobiles, are refused the "Open Sesame" at the magnificent country seat of John D. Rockefeller, at Pocantico Hills.

"Automobiles are not allowed on these grounds."

These words constitute the warning on galvanized iron signs mounted on iron posts scattered throughout the place.

There are fifty miles of private driveways on these grounds, many of them along steep embankments. The multi-millionaire's horses have been frightened many times by automobiles. Hence his dislike for them. Moreover, men have been engaged to enforce the rule.

Climbed Mount Greylock.

Greylock Mountain, in the Berkshires, has been scaled in automobiles. A party of five North Adams (Mass.) men accomplished the feat last week, ascending the mountain to a height of 3,500 feet above sea level in two automobiles. The distance from North Adams to the summit was twelve miles, over heavy mountain roads. This was the first time the feat had been attempted.

Oyster Bay is Disturbed.

Oyster Bay, the home of the President, now has another title to fame. Last week an association was formed there to restrain the reckless use of automobiles in the roads around Oyster Bay.

Senator William W. Cocks, who has been active in promoting legislation for the protection of the highways, presided.

It is understood that it is the purpose of the association to co-operate with the District Attorney of Nassau County and other public officials in the movement already begun against the reckless running of automobiles, devoting special attention to the protection of the roads in the neighborhood of Oyster Bay, and to promote such additional legislation as experience may prove to be

Dow Coils for the Dash.

It is coming more and more to be the practice to place the spark coil on the inner face of the dashboard. This position means, should it become necessary to examine the vibrators or reset them, that they can be attended to at once without tearing apart



some portion of the vehicle proper. In fact, this position is obviously the proper one.

The coil illustrated herewith is one of the latest products of the Dow Portable Electric Co. It is incased to fasten on the dash, and is made in duplex, triplex and quadruple form for two, three or four cylinders. Detailed information and prices can be had by addressing the company at 218 Tremont street, Boston, Mass.

Opp is out a Car.

A peculiar tangle is that in which John Opp, of Findlay, Ohio, has become involved, and about all he can tell at present is that he is out a second-hand automobile, with small prospects of recovering it.

It appears that he bartered for a new \$1,700 steam machine from the Toledo Motor Carriage Co., through J. W. Moss, who, it develops, had been discharged the day before. He made arrangements to turn in his old machine at \$400. Happening to be in Toledo, he made the purchase, took his new machine and promised to send the old one. Arriving home, he found Moss and the old machine gone, supposedly to Toledo. A request from the company for the other machine opened his eyes, and he then discovered that Moss and the other machine had as completely disappeared as though swallowed by the earth. He bought the new machine outright and notified the police.

War in Quaker City's Suburbs.

Suburban Philadelphia is much wrought up over the advent of the automobile. Family is arrayed against family, millionaire against millionaire. One story of the feud runs this way:

The most interesting episode of the present season has been a millionaires' war, in which one of them was fined. The story as developed at the hearing is thus:

Millionaire Wetherill was out driving one evening with some members of his family behind an ordinarily gentle horse. Out of the distance and along the gray road in a cloud of dust came Millionaire Drexel, Mr. G. W. Childs Drexel. Mr. Wetherill's horse immediately began to execute a pas de seul in the direction of a roadside ditch and fence. The Wetherills were in danger of their: lives, the head of the family testified. He held up his hand as a signal for Mr. Drexel to shut off steam, but instead the Drexel flyer, he swore, swept by on the wings of the wind.

Millionaire Wetherill immediately sought the aid of the law. He swore out a warrant for the arrest of Millionaire Drexel. The warrant was served, and the fashionable countryside was proportionately agitated. The hearing before 'Squire Buckland was a corker. Mr. Wetherill gained his point, and Mr. Drexel was fined.

Officers and Plans of Centaur.

At the recent meeting of the stockholuers of the Centaur Motor Vehicle Co., of Buffalo, N. Y., the following officers and directors were elected: Emery Lewis, jr., Bradford, Pa., president; H. C. Wilcox, Bradford, Pa., vice-president; J. B. Eccleston, Buffalo, N. Y., secretary and treasurer; Delevan Emery, Bradford, Pa., and M. F. Barrett, of Buffalo, N. Y.

The company have made a long time lease of the five story brick factory building at No. 59 Franklin street, having two store fronts on Franklin, and are now rapidly installing the most modern machinery for the manufacture of the Centaur electric and gasolene automobiles.

Will Probably Amalgamate.

Writing to the Motor World in reference to the newly formed automobile club of that city, a prominent Philadelphia automobilist says:

"The Automobile Club of Philadelphia has been practically asleep for the past two years. When they found out a new club was going to be organized, they got a little life into them, and it now looks as if the old club would be rejuvenated and most of the members of the new club join the old one, instead of starting a new one. This will be decidedly the best all around, if it can be carried through, and I believe it can."

Terwilliger Bros., Amsterdam, N. Y., who recently finished a steam carriage, are planning to form a company to engage in the manufacture of similar vehicles.



PARLIAMENT'S AID

To be Invoked to Permit Bennett Cup Race to be Run in England.

He would have been deemed a foolish man who a month ago had predicted that a big automobile race, such as have become familiar through French practice, would be projected for English roads. Yet such is the case, and so great is the popular enthusiasm over the winning of the Bennett Cup by an English car and driver that the matter does not seem improbable of accomplishment.

The Automobile Club of Great Britain intends to leave no stone unturned in its efforts to have the next race for the Coupe Internationale take place in England.

That it will be a difficult task is fully realized. In the first place, nothing of the kind could be attempted without a special act of Parliament. This will be sought, and the influence of the Automobile Club will be brought to bear in its favor.

At the present time Mr. Scott Montagu, M. P., has a bill before Parliament putting the regulation of automobiles on public roads into the hands of the local government boards. Should this bill pass, automobiles would then be on the same footing as other vehicles. The next step would be to secure Parliamentary authorization empowering the local government boards to grant licenses for a race to be held over roads in their jurisdiction.

It is thought the sporting spirit of the entire nation will be aroused to such an extent by the prospect of an international race that the objecti ns to automobile racing in the public roads will be overcome for this occasion, but in order that there may be as little interference to traffic as possible the Automobile Club will take the utmost precautions.

The plan is to hold the races between the hours of 2 and 8 o'clock in the morning, and extend the contest over two days. In these early hours of the morning there is comparatively no traffic on the roads. An approximate distance of about two hundred miles could be covered each morning.

As to where the race should take place there is a great deal being said about the course between London and Edinburgh, which is just about four hundred miles long. The objection to this route, however, is that the roads in the neighborhood of London are too greatly travelled, even in the early morning. Another route much talked about is to make a start at some point in the manufacturing districts of the north.

The town of Preston, which is about thirty miles north of Liverpool, is suggested by some. It is connected with the north by excellent roads. A course of about two hundred miles through a section of country sparsely populated could be selected between Preston and Glasgow, by way of Kendal, then over the Cambrian Mountains, which would give about ten miles of climbing, and

through Penrith to Carlisle. From this latter point there is a stretch of more than one hundred miles of first class road to Glasgow. From Glasgow to Edinburgh is fifty miles more. The remaining one hundred and fifty miles of the four hundred mile course might be done along the fine roads of the east coast, the course turning southward at Edinburgh and continuing through Berwick as far south as Newcastle or Sunderland.

Members of the Automobile Club are convinced that, if the necessary authorization is secured, the contest can be run without any serious interruption of ordinary traffic and without danger to the public by utilizing the early morning hours of two successive days.

Double Insulated Mica Core.

In the endeavor to get away from the breaking tendencies of the porcelain core for spark plugs, many non-conductive materials have been used. Probably the most used



material to this end has been mica in the form of thin washers compressed together at their faces. While this gave a core that was free from breaking, the fault which frequently developed came from the tendency of the washers to flake in handling. This meant that a tight joint was not secured, with a consequent cross leakage.

To overcome these various difficulties the American Coil Co., West Somerville, Mass., nearly two years ago got out a double insulated mica cored sparking plug on which they were granted a patent dated April 1, 1902. For this plug it is claimed by the makers that it is the only way that a mica plug can be made which will stand up and do the work required of it.

Spaulding's Cincinnati Agency.

The Special Motor Vehicle Co., 640 Main street, Cincinnati, O., have taken the agency for the Spaulding automobiles. One of their first customers was D. G. Edwards, Passenger Traffic Manager of the C., H. & D. road.

NIEMANN'S TRAP

Is Still set, but the Bag is Small—Arrests are Undoubtedly Illegal.

Although a law of this State expressly states that no ordinance reducing the speed of motor vehicles to less than fifteen miles an hour in the portions of a town or village that are not built up, District Attorney Niemann of Nassau County continues to maintain his automobile trap on the Merrick Road.

His bag on Saturday and Sunday last was small. The news has gone abroad, and most motor vehicle users have become too wary to be caught exceeding even eight miles an hour, the limit set by the self-appointed lawmaker. One of the most sensational arrests took place on Sunday, when Lillian Russell, the actress, with three or four men companions, was caught in the toils. The owner of the car, Jesse Lewisohn, bailed out his chauffeur, and the party were permitted to go.

Previous to this, however, Justice Wallace was given a ride in the car, just to show how slow eight miles really was. The first trial resulted in the alleged limit, eight miles, being exceeded again; but the second time, by dint of crawling, the time over one of the measured stretches was figured out at a trifle under eight miles.

It will perhaps be news to District Attorney Niemann to learn that the Doughty bill, passed in 1901 and still in force, contains this clause:

"No ordinance, rule or regulation adopted by the authorities of any municipality shall require an automobile or motor vehicle to travel at a lower rate of speed than eight miles per hour within any city, town or village of the State in the built-up portion thereof, nor at a lower speed than fifteen miles per hour, where the same are not built up."

The American Motor League has taken action in the matter that will probably result in the legality of the arrests being tested. It takes the position that the District Attorney's actions are illegal, in view of the Doughty law, and if any of its members are interfered with it stands ready to protect them.

At the Turin Fete.

An "Automobilists' Cotillion" was one of the features of the Turin exhibition. On entering the fête ground each lady was presented with a numbered ticket. She had then to seek her "partner," who took her for a spin in his motor car. An automobile battle of flowers was held on the day following this new kind of "dance."

During the month of May the exports of automobiles and parts reached a value of \$148,647. For the eleven months of the fiscal year, ending with May, the value was \$817,-378



A Fine Forty Mile Ride.

One of the pleasantest 40 mile trips in the vicinity of New York City is over a route which includes the greater part of the famous Hudson County Boulevard and the fine Staten Island roads.

Starting from the heart of the city, proceed to the 42d street ferry, and after ferrying across the Hudson ascend the hill to the Hudson County Boulevard. This hill will prove a good test for the machine. If it reaches the top all right it is safe to bank that the car will go the route.

Having reached the boulevard, turn to the right and follow this one-hundred-foot wide macadamized road to its end, at the Bergen Point Ferry, a distance of fourteen and onequarter miles. Then ferry to Richmond, S. I., and proceed to the pretty little villages, Graniteville, Bullshead and Springfield, Continue across the long bridge over the Fresh Kills, then turn to the left to the crossing bridge, near the old town of Richmond, and proceed on the ancient post road to the White Horse Tavern, at New Dorp. Here turn to the left of the post road and follow the car tracks until Vanderbilt avenue is reached. Stay on Vanderbilt avenue as far as the Shore Road, leading through Clifton, Tompkinsville and St. George's ferry, where the Staten Island boat can be taken back to the Battery. Every inch of this ride of forty miles is on the very best macadamized roads.

House of Commons to be Called on.

A bill will shortly be introduced in the British House of Commons, the principal object of which is to provide that the present absurd restrictions as to speed shall be abolished, and that automobiles shall come under the ordinary law of furious driving. In return for this there is to be a clause compelling every motor vehicle to be numbered and registered, and thus provide a ready means of identification in case of furious driving or accident.

"The registration of cars will, no doubt, if brought about, prove very distasteful to most automobilists, but the removal of the ridiculous speed limits now in operation would, at any rate, be a sort of recompense for the concessions," says the Autocar, referring to the matter. "A considerable portion of the public entertain certain peculiar prejudices against autocars and those who drive and own them, and the numbering of cars is suggested to allay the fears of many whose chief objection is that under the present system there is very little means of identifying cars in the case of accidents.

"At the same time, the experiment is a risky one, and we are inclined to believe that it would be in many respects safer to leave things alone—speed limit and all—than to tamper with the numbering clause, as it seems to us that those who are determined to make trouble for motorists will do so in any case, until existing prejudices have died a natural death.

"The reason we are opposed to the num-

bering compromise is on account of the fact that it will put a very dangerous weapon into the hands of the police and other persecutors. The ideal is the removal of the speed limit, and it seems to us it would be better to ask for what we really want-that is, to be put on a level with horse carriages. If numbering is suggested it should be for all vehicles, whether motor propelled or horse drawn. This course may be less diplomatic, but there is time to suggest compromises after the abolition of the speed limit is proposed, as the opposition may not be so strong as is anticipated, and it will become less every day as the number of members owning cars increases."

The Proper Pressure for Tires.

Some very interesting experiments have been conducted by the makers of the Continental detachable tire, so well known in Europe, their purpose being to determine the proper amount of pressure a tire should have in order to give the best results.

It is, of course, understood that if the tire is overinflated the vibration of the car is much more severe, and, further than this, the high internal pressure of air is needlessly straining the walls of the tire. At the same time automobilists know so well that the poorly inflated or "flabby" tire is even more harmful, so that the tendency generally is to be on the safe side and to overinflate.

The correct pressure is that which is sufficiently high to insure that the weight of the car shall never press the tires flat or cause them to be cut or pinched by the rim under any conditions. That is to say, they must not merely be inflated sufficiently to carry the car well on a smooth road, but there must be no bumping of the rim onto the tire when passing over obstructions like road crossings and drain covers. However, the Continental company has made a series of careful experiments, and the results are given herewith:

Opinion From a Good Source.

There is at the present time too great a tendency to minimize the value of speed contests and speed cars. In many quarters it is believed that they have no influence whatever on the construction of road vehicles, than which it would not be easy to entertain a greater misconception.

In a recent chat with Alexander Winton—than whom no man living is more qualified to speak on such a subject—he emphatically expressed the opinion that without speed contests the machines of to-day would never have been possible.

Pointing to the splendid Winton touring car, he asserted that this car was made from the best points of the Winton racer, and that without the speed trials it could never have possibly existed.

Speaking of the new Winton racing car, which, rumor has it, is more than likely to be an eye opener, Mr. Winton stated that from it might be born a newer and even better car.

"It is," he said, "only through high speed that the best results from a motor and the mechanism of the car can be obtained, and the accuracy necessary to secure the results aimed at is only possible through this means."

Mr. Winton believes, however, that racing should be safeguarded in every possible way, and has no sympathy whatever with attempts at high speed without proper restrictions and under proper conditions.

Cowan now Acquires it.

After a double change in ownership, Edward Cowan now owns and conducts the automobile storage and repair business at 36 and 38 Dwight street, Springfield, Mass. The business was originally conducted by Cowan & Turnbull, but in January last J. A. Turnbull, jr., bought out his partner's interest. Last week the ownership was again transferred, Cowan buying out his former partner. The station is well equipped for charging storage batteries, and will be open day and night.

LIGHT VOITURETTE TIRES.

65 mm. 220-400 lbs, per axle 32 lbs, pressure per square inch (2 atm.) 65 mm. 350-520 lbs, per axle 40 lbs, pressure per square inch (2½ atm.) 80 mm. 220-450 lbs, per axle 32 lbs, pressure per square inch (2 atm.) 85 mm. 440-600 lbs, per axle 40 lbs, pressure per square inch (2½ atm.)

STRONG VOITURETTE TIRES.

 $65~\mathrm{mm}.$ $450-650~\mathrm{lbs},$ per axle $40~\mathrm{lbs},$ pressure per square inch (2½ atm.) $650-900~\mathrm{lbs},$ per axle $56~\mathrm{lbs},$ pressure per square inch (3½ atm.) $80~\mathrm{mm}.$ $450-650~\mathrm{lbs},$ per axle $40~\mathrm{lbs},$ pressure per square inch (2½ atm.) $85~\mathrm{mm}.$ $650-950~\mathrm{lbs},$ per axle $56~\mathrm{lbs},$ pressure per square inch (3½ atm.)

EXTRA STRONG VOITURETTE TIRES

65 mm. 650- 900 lbs. per axle 56 lbs. pressure per square inch (3½ atm.) 900-1200 lbs. per axle 70 lbs. pressure per square inch (4½ atm.) 80 mm. 650- 900 lbs. per axle 56 lbs. pressure per square inch (4½ atm.) 85 mm. 900-1100lbs. per axle 64 lbs. pressure per square inch (4 atm.) 85 mm. 1100-1300 lbs. per axle 85 lbs. pressure per square inch (5 atm.) 90 mm. 1300-1300 lbs. per axle 85 lbs. pressure per square inch (6 atm.) 90 mm. 1300-1300 lbs. per axle 96 lbs. pressure per square inch (6 atm.) 120 mm. 1300-2000 lbs. per axle 80 lbs. pressure per square inch (6 atm.) 120 mm. 1800-2000 lbs. per axle 96 lbs. pressure per square inch (6 atm.) 120 mm. 1200-2000 lbs. per axle 96 lbs. pressure per square inch (6 atm.) 120 mm. 2200-2600 lbs. per axle 96 lbs. pressure per square inch (7 atm.)



Besides being sordid grafters, the majority of Philadelphia's municipal legislators are ignorant incompetents and utterly indifferent to the public welfare. They are active in ill-doing, but in the absence of the stimulus of prospective loot they cannot be depended upon to do anything at all.

An ordinance regulating the speed of automobiles is an urgent need of the city. It is demanded by the public as a measure of protection and desired by the owners of automobiles as a guide and a definition of rights. Such an ordinance was prepared, and its terms were agreed upon by all parties concerned. The limits of speed were satisfactory to the public and to reasonable automobilists, and there was no reason why the ordinance should not have been passed without delay.

But stupidity prevailed in Common Council, amendments which were unnecessary were made, and the ordinance was left upon the table when councils adjourned for the summer. The public will be left to protect itself against scorchers for a few months.— (Philadelphia North American.

The record made in a recent automobile race between Paris and Vienna affords food for thought in more than one direction. The apparent winner, M. Kenault, by no means a famous chauffeur, drove a machine of his own invention 782 miles at an average of 51¼ miles per hour. This is a higher speed than the average for the 20-hour trains between New York and Chicago. When we reflect that the locomotives are run over smooth rails with signals at every block, while the automobile was driven over ordinary highways, including sections with neck breaking possibilities, the achievement is the more signal both in its nerve and its recklessness.

The first thing which this impresses upon the thoughtful mind is that such speed upon highways open to pedestrians, riders and drivers, and even slower motors, cannot be made consistent with safety. Railway experience has got to the point that tracks on which fast trains are run must not even cross highways at grade. Yet there was an automobile run for nearly 800 miles over the common highway at a rate that gave to a collision with a wagon, a cow, a dog or man a fatal significance. For any such speed a special track must be devised. The use of that, also, must be strictly regulated,

For if one automobile were forced to stop or crippled to a slow speed the succeeding 50-mile-an-hour speeder might give the rearend collision a new significance.

But with the question of regulation to insure safety fully met it is plain that automobiles capable of running at that speed, or even a considerable margin below it, and provided with tracks for their special use, comprise possibilities which grow with study. We can concede that the example suggests very strongly that the limits of railway speed are not fully developed. But, allowing for that, a vehicle for travel, capable of high speed on tracks costing much less than the railways, and able to turn in any direction that its passengers for the time being may desire, might be the means for radical changes in land travel in the immediate future.—(Pittsburg (Pa.) Dispatch.

Nobody need be worried a bit by the disgraceful squabble in which the contestants in the automobile race between Paris and Vienna are now engaged. It will merely bring new discredit upon the automobilists whose only ambition is speed, and the more that is done the better for all who have any appreciation of a noble machine's real value. and enough intelligence to use it properly. These racers went at breakneck speed from the French to the Austrian capital, and the numerous accidents that marked the progress of the contest showed that the sacrifices of everything to speed to which the shortsighted manufacturers are incited have been wildly excessive, even from the scorcher's point of view. The prize has been awarded to a man who seems to have been literally maddened by weariness and excitement, for, according to the cable dispatches he rushed past the place in the outskirts of Vienna where he knew the rules of the race required him to stop, and traversed the crowded city streets at the rate he had maintained in the open country. Because he is a Frenchman may or may not be the reason why he has not been disqualified in favor of rivals who heeded the accepted conditions, but the problem does not concern any except the participants in the race. They are a class apart, and the more clearly that fact is recognized the less will the consequences of their sins and their follies be visited upon automobilists who are public benefactors, not public dangers.—(N. Y. Times.

The automobile is passing through the same stage as the bicycle did years ago, when there were always a large number of "scorchers" who made life miserable for pedestrians and wheelmen and did much to cause the latter to be heartily disliked, and many absurd ordinances were passed on account of them. In a certain south side village in Suffolk County there is an ordinance which forbids the riding of a bicycle faster than four miles an hour, and this piece of "blue law" brain work has never been repealed, either, and can be enforced to-day.

The "automobile scorcher" is just as much of a nuisance as was his wheeling prototype, and he is to blame for the feeling prevailing throughout this county against the automobile and its owner. The Long Island Automobile Club and the Automobile Club of America have both taken a firm stand relative to "scorching," and any member found guilty of so doing will be expelled from the club to which he belongs. It can be truthfully said, however, that the club members are rarely guilty of the practice, but it is generally some half grown boy, whose indulgent parents have presented him with an automobile, that does the speeding.

In the section embracing Garden City, Hempstead, Wheatley Hills and Westbury there are more automobiles than in all the rest of the island together, and the majority of the owners belong to one or the other of the clubs spoken of. None of these have ever been arrested, and the example of Foxhall Keene could well be followed by his brother chauffeurs. When Mr. Keene meets a horse or team that shows extreme fright he stops the automobile and assists the driver of the vehicle to get his horses past the machine, and in many instances he has endeavored to break the animals into being used to the machine by driving it slowly along beside the carriage. The outcome of District Attorney Niemann's war on the speeding chauffeurs is awaited with interest by all who have been annoyed by the offenders, and he will have no firmer supporters in his movement than the Long Island Automobile Club.—(Brooklyn Eagle,

The performance of M. Renault, who seems to have won the big automobile race, from Paris to Vienna, was wonderful indeed, according to the reports. The 782 miles between the two cities named was covered at an average rate of 51½ miles per hour.

Taking into consideration the fact that in many places rough roads and steep grades were encountered, which necessitated going slow and with great caution, long stretches of ground must have been covered at a pace that was simply terrific—probably at not less than 100 miles per hour; and the danger attending such great speed in a region more or less mountainous may easily be imagined. Several of the candidates entered for the race refused to compete through fear that their machines could not withstand the course.

What practical significance have such breakneck races? Well, they prove the immense progress made in the art of constructing motors. The rate of speed averaged by the fastest trains in the world is slow compared to that of M. Renault, when allowance is made for the vast difference in the character of the road travelled by each.

Automobile speed tests have become unpepular in this country; nevertheless, we note an absorbing interest here in the result of such trials abroad; and while the powers of the automobile continue to grow this interest is bound to increase.—(N. Y. Sun.

The Suspension Wheel Inventor.

The question as to who invented the suspension wheel now exclusively used for cycles and largely employed in connection with motor cars is a much debated one.

It has been ascertained that manuscripts left by a Spaniard, Leonardo da Vinci, a contemporary of Columbus, contain a sketch of a suspension wheel and an autographic note describing the device as one "by which wheels are strengthened and a light wheel made strong." This invention antedates 1490.

A wheel in the National Museum in Washington is a reproduction from this sketch. The next record of a suspension wheel is found in the British Patent Office, where Theodore Jones, in 1826, filed his application for a patent on an "improved construction of carriage wheels of such nature that the weight they have to carry is suspended from that part of the wheel which happens to be uppermost, instead of being supported, as is usual, by the spokes that happen to be under the axle tree."

The Doctor Asks Some Pertinent Questions.

It is gratifying to note that one of the Philadelphia Councilmen at least is able to look upon automobiles with other than a jaundiced eye. Dr. Thomas J. Morton, Common Councilman from the Twentieth Ward, was one of the two members in the lower branch of councils who voted against an

amendment to the automobile ordinance reducing the speed limit. It was proposed to make the limit seven miles an hour in the built up sections of the city and eight miles in the suburbs.

"I am a road driver myself, and know that eight miles an hour is a slow gait," said Dr. Morton, in explaining why he voted against the amendment. "I would not own a horse that could not go twelve miles an hour. Why, an animal that is of good stock can walk at the rate of seven miles, and when jogging along will far exceed the limit allowed by the Fairmount Park regulations. What is the use of hampering automobilists with a speed that is not fast for a horse, when it is acknowledged by almost everybody that the machines are easily controlled and as quickly brought to a stop as a fast speeding team.'

Object to Clubhouse.

Although the new clubhouse of the Arverne Automobile Club, at Arverne, N. J., will be an exceedingly handsome building, some of the old fogy summer residents are seeking to prevent its erection. The site is in the heart of the finest residence section of the place. Objection to the clubhouse is based upon the fact that the plans show that the building will have storage capacity for one hundred automobiles. It is asserted that all this property is held under restrictions that none of it shall be used either for stables or stores, and it is maintained that a storage place for automobiles will make the clubhouse a stable, and therefore bring it under the ban.

Best Route of all.

That well posted driver and tradesman, Frank Eveland, who has frequent occasion to make use of the roads between Philadelphia and New York, has discovered what he considers by long odds the best route between the two cities,

"Take the Camden ferry from Philadelphia, then fellow the trolley route direct to Moorestown and to Mount Holly," he says. "The roads between Camden and Moorestown are all ridable, although they are rough in spots. From Moorestown to Mount Holly they are fairly good. Continue through Mount Holly to the stone road leading to Bordentown, then follow the main direct to Trenton. Do not enter the centre of Trenton, but turn to the right at Greenwood avenue, continuing to and through Windsor, Hightstown, Cranbury, Dayton, Deans, New Brunswick, Metuchen, to the Perth Amboy ferry.

"On reaching Tottenville, Staten Island, continue on the Amboy Road to St. George

"This road is good under any weather conditions, and every foot of it from a little east of Mount Holly is a beautiful macadamized road, the only objectionable part of the route being between Camden and Mount Holly."

An automobile manufacturing company is reported to be in process of formation at McKeesport, Pa.



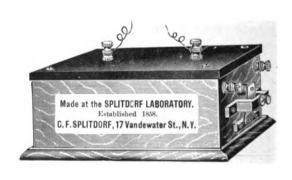


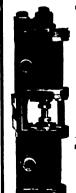
THE STEAM RUNABOUT.

THE Century Steam Touring Car is large enough in all its parts to be sound and sturdy as a locomotive. It won a Blue Ribbon in the Long Island Automobile Club's 100-mile Endurance Test, and has beaten in private trial the American Steam Record for one mile. It ran from New York to Syracuse over the worst part of the A. C. A. endurance course at an average of 20 miles an hour. With eight-foot wheel base, powerful in proportion, it is a revelation to steam vehicle users.

In our engine, two cylinders set tandem, turn directly, like a boat engine, the shaft which drives through a single gear; engine and gear dust proof and run in oil. No torch is used, no wind affects the fire, no levers in the way—the steering handle controls the power. Free from so-called "steam troubles." Just what you have been looking for—ready to ship. Steamers from \$900 up. Electrics from \$1250 up. Gasolene 15-h. p., \$2500. Send for particulars.

CENTURY MOTOR VEHICLE COMPANY, Syracuse, New York.





The VICTOR STEAM PUMPS

Weight 4½ lbs.; space required in carriage 9 in. in length x 3 in. in diameter.

AIR PUMP. Capacity 80 lbs. pressure on fuel tanks or tires in one minute, with a boiler pressure of 125 to 150 lbs.

WATER PUMP

Capacity 3 gallons per minute against 200 lbs. boiler pressure.

PRICE, \$30.00 each.

These pumps have been adopted by the Locomobile Company, the Mobile Company and other leading manufacturers of steam carriages.

The grade is shown by the location of a bronze ball running in a graduated concave tube filled with spirits.

PRICE, \$1.25 Postpaid.

OVERMAN AUTOMOBILE CO., 7 East 42d St., New York

For Fire or Surgery.

A combination vehicle forms a part of the fire apparatus owned by the town of Breslau, Germany, has some good features. It serves either as a small fire engine or to transport the surgical and other necessaries for first aid in case of an accident.

The vehicle has seats for three riders, and one man behind. It is nine feet long, and has a breadth of four feet six inches. Without equipment it weighs 500 pounds, with fire accessories about 1,300 pounds. It is driven by an Aster gasolene motor, but can also be worked by pedalling, thus insuring greater speed, and prevention from complete breakdown at a critical moment, while that extra brake power can be provided by back-pedalling which a sudden stop in the mad rush through the crowded streets so often necessitates.

The machine is furnished when required for fire service with a fire bucket, hose reel, nearly a hundred feet of hose, nozzles, hydrant key, lantern, etc., and is fitted with a large, loud bell to warn of its approach, as well as a torch for night work.

The vehicle, which stands prepared at the fire brigade station ready for a call night or day, can be started on its errand with its riders in from ten to fifteen seconds. It travels at the rate of from 400 yards to 600 yards a minute—a speed which it would be impossible to obtain with a large fire engine, no matter how well horsed.

Two light handles of rolled steel are affixed to the body of the machine, and a surgeon's case is carried, with which is also the body of a folding litter. With this, valuable assistance in first aid can be rendered to persons injured at the time of a fire, or to the victims of an accident from any cause.

Why it Excels.

In touching upon the advantages possessed by the Serpollet steam car one of its sales agents abroad makes the following broad claims for it:

1. It is noiseless. 2. A 12 horsepower meter can be used. 3. It condenses its steam and returns it to the reservoir. 4. It has no gear. 5. It has no electric ignition. 6. It will do up to 100 miles with once filling the water and fuel reservoirs. 7. The whole mechanism gives no anxiety on a tour or in congested thoroughfares. 8. It is the finest hill climber. 9. Paraffine is used as fuel, and that of the cheapest brand. He also expresses a willingness to give a trial run for any distance up to 100 miles, though he thinks that the 6 horsepower motor will climb a gradient of one in six.

Has Schwab for a Backer.

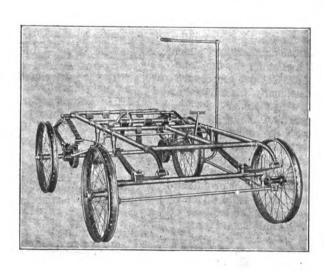
Representatives of Charles M. Schwab, James Brady, of Albany, and Max Fleischmann were in Newton, N. J., last week, looking for a site upon which to erect a factory for the manufacture of a new automobile patented by C. J. Dorticus, of New York, says a dispatch from the first named town. They expressed themselves as pleased with the old Woodlawn racetrack as a site for the prospective plant.

HERCULES RUNNING GEARS

FOR ELECTRIC AND GASOLINE VEHICLES

There are no weak spots in these gears.

Don't confound them with gears which have been hastily constructed to meet an early demand from automobile makers.



We also solicit orders for parts of these gears.

Their design is original and the construction is sound. Prices and particulars of construction sent upon application.

THE AUTOMOBILE AND CYCLE PARTS COMPANY SMITH STAMPINGS FACTORY

Milwaukee & Wisconsin

Millionaires Could not Agree.

'It appears that the deadlocking of the Philadelphia Councils, which resulted in the proposed automobile ordinance going over until October, was caused by a quarrel between two sets of Quaker City millionaires. One was composed of horsemen, the other of automobilists. A short but sharp battle was fought, resulting in what was practically a draw. The story is an interesting one:

"The failure of the automobile law to pass was really due to a personal wrangle between two sets of wealthy people," writes W. D. Gash, to the Motor World. "Mr. A. J. Cassatt, president of the Pennsylvania Railroad Company; Mr. Wayne MacVeagh, and a few other millionaire Pennsylvania Railroad officials, have country places just west of Philadelphia, and incidentally are very fond of fine horses, and don't like automobiles. Mr. McFadden and some other millionaire automobilists, have some imported French cars, which frequently frighten the fine horses of the aforesaid Pennsylvania crowd.

"So after the ordinance had been approved, Mr. MacVeagh sent for one of the Councilmen and gave him some amendments, which he wished inserted, and as he has the Pennsylvania road behind him, and the councilmen like to ride occasionally, his advice has considerable weight with them.

"We have the press of Philadelphia with us, and managed to get the ordinance tabled until fall, which means until the end of the present riding season, when we hope that, before another riding season comes round, the two above mentioned bunches of millionaires will have settled their little difficulty in some other way than at the expense of both the public and the automobile users of Philadelphia."

Brazil Wants Motor Cars.

A Brazilian import house wrote the following letter to a Continental contemporary, dated March 5, 1902: "A few days ago a motor car of French origin arrived here and created the utmost astonishment among the whole population. In spite of the hilly country the vehicle did excellent work and took incline after incline, after which performance many prominent residents expressed their desire to purchase similar vehicles. Can you recommend a factory which would send a few vehicles on consignment, to be shown and sold? I would only ask for a commission of 10 per cent. Such a good market should not be neglected."

The Week's Exports.

Gothenburg—One case auto parts, \$160. Glasgow—Two cases motor vehicles and parts, \$1,520.

Liverpool—Two cases auto vehicles, \$4.455. London—Fifteen cases motor vehicles and parts, \$7,430.

New Zealand—Three cases A. vehicles, \$350.

Southampton—One case motor vehicles and parts, \$152.

The Week's Patents.

703,881. Driving Gear for Motor Vehicles. Earl E. Wright, Rochester, Pa., assignor of one-half to Phillip Lee, Rochester, Pa. Filed Sept. 26, 1901. Serial No. 76,601. (No model.)

Claim.—1. In driving mechanism for motor vehicles, the combination of a main framework, a rotatable shaft mounted in bearings therein provided with bevel wheels at each end, traction wheel bracket bearings pivotally mounted in each outer end of the framework provided with clearance openings, traction wheels rotatably mounted on said bearings provided with bevel wheels pivotal shafts connecting the traction wheel bracket bearings with the main frame and carrying bevel wheels intermeshing with the driving and driven bevel wheels and extending through said clearance openings, with means for transmitting motion to the main shaft.

703,895. Separator Plate for Secondary Batteries. Absalom F. Clark, Philadelphia, Pa., assignor to J. Horace Harding, Philadelphia, Pa. Filed Oct. 18, 1900. Serial No. 33,470. (No model.)

Claim.—1. As a new article of manufacture, a separator for use in connection with secondary battery grid plates, said separator comprising a frame, a series of crossbars secured to said frame and a series of supporting bars at the back of and embedded in the crossbars, each of said crossbars forming, with the grates of the grid, a series of pockets, substantially as described.

703,937. Vaporizer for Explosive Engines. Joseph Lizotte, Quincy, Mass., assignor of one-half to Mellen N. Bray, Boston, Mass. Filed Nov. 21, 1901. Serial No. 83,089. (No model.)

Claim.—1. In a vaporizing device the combination of a mixing chamber, an air chamber, above the mixing chamber, an air valve between said chambers provided with a stem extending outside the mixing chamber, a gasolene valve above the air valve having a stem extending through the stem of the air valve and provided with a shoulder for determining the movement of the air valve with relation to the gasolene valve, a spring between the valves, and a spring for holding the air valve to its seat, substantially as described.

704,060. Internal Combustion Engine. Frank Lister, Keighley, England. Filed July 27, 1901. Serial No. 69,925. (No model.)

Claim.—1. In an engine of the class described, a cylinder having an inlet port, a cylinder having an exhaust port, pistons operating in said cylinders, a crank shaft, an intermediate rigid connecting piece extending rearward from the crank toward the two pistons and pivotally connected with the crank and pistons, and means for guiding said intermediate piece in a predetermined path during its reciprocation, whereby said crank shaft is coupled to said pistons so that one piston leads the other, substantially as herein specified.

704,099. Electric Motor Regulation. Oscar H. Pieper and Alphonse F. Pieper, Rochester, N. Y. Filed March 24, 1899. Serial No. 710,366. (No model.)

Claim.—1. The combination in a motor for alternating currents, of field windings, armature coils, commutator and commutator brushes arranged at the neutral point, all connected in series, as customary in constant current motors, and a regulating device for controlling the speed of the motor consisting of variable resistance permanently in shunt across the armature.

704,125. Battery. William T. Seddon, Minersville, Penn. Filed July 20, 1901. Serial No. 69,113. (No model.)

Claim.—In a battery the combination with a cell or case having vertically grooved strips arranged upon opposite sides of the zinc plates arranged in the said groove, and having shoulders at their upper ends adapted to rest upon the strips, and the carbon electrodes having shoulders at their upper ends, said carbon electrodes being hollow and adapted to receive a depolarizing solution, substantially as set forth.

704,151. Wheel for Motor Vehicle. George O. Venner, Lawrence, Mass. Filed May 1, 1902. Serial No. 105,422. (No model.)

Claim.-In combination with a wheel, of the rim, a metal tire surrounding the same, said rim having a series of chambers extending radially therethrough, a tooth located in each chamber, each tooth having an enlarged head, which projects beyond the bearing surface of the rim and having a shank, which projects through the inner side thereof, a stop plate through which said shank passes, bolts for securing said plate to the inner side of the rim which pass through said tire, rim and plate successively, the heads of said bolts engaging the outer side of the tire, nuts on said bolts which engage the opposite side of said plate from the rim, a spring which is interposed between said plate and said enlarged head, and a stop for limiting the outward movement of said tooth, substantially as described.

704,156. Steering and Braking Device. Christian F. Weeber, jr., Albany, N. Y. Filed December 13, 1901. Serial No. 85,756. (No model.)

Claim.-1. In an automobile, a steering and braking device consisting of a rocking shaft, adapted to turn in bearings attached to the automobile; a downwardly projecting arm and an upwardly projecting arm attached to said rocking shaft; a connecting rod connecting the said downwardly projecting arm with the steering knuckles of the automobile, whereby the rocking of said shaft in its bearings will operate said steering knuckles; a handle attached to said rocking shaft; a brake lever attached to one end to said upwardly projecting arm of said rocking shaft. and at the other end to the brake, by suitable intermediate connections and means for connecting said brake lever to said handle, whereby said handle will be adapted to both operate said brake and turn said rocking shaft in its bearings, substantially as described and for the purposes set forth.

704,252. Process of Making Plates for Storage Batteries and Product Thereof. Henry K. Hess, Philadelphia, Penn. Filed July 30, 1901. Serial No. 70,273. (No specimens.)

Claim.—1. The process for forming an electric battery plate consisting, first, in mechanically applying an active material or material to become active to the back piece of a suitable mold; second, arranging portions of a series of separate metal strips against the material in separated relation and other portions in sliding contact; third, applying mechanically extra active material or material to become active to the exposed surfaces of said separated portions of the strips are concealed, and then compressing the active material so as to form a self-supporting mass to hold the strips in position.

704,253. Steam Propelled Vehicle. Henry K. Hess, Philadelphia, Penn. Filed November 15, 1901. Serial No. 82,876. (No model.)

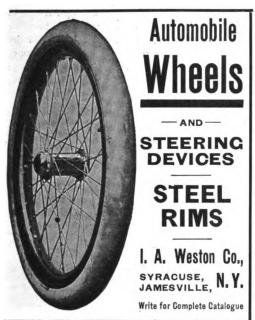
Claim.—1. A vehicle comprising a running gear and body, a steam generator and engine

mounted on the body, means actuated by the engine and connected to the generator to force air into the combustion chamber, and additional means controlled by the operator for connecting and disconnecting the engine and running gear independently of the former means.

704,254. Steam Propelled Vehicle. Henry K. Hess, Philadelphia, Penn. Filed January 14, 1902. Serial No. 89,713. (No model.)

Claim.—1. The combination of a vehicle body, a steam generator mounted on the body, a coal bunker located by the side of the generator, a rotary grate beneath the steam generator, an additional grate beneath the bunker arranged to discharge the fuel upon the former grate, an air chamber beneath one of the grates and means for supplying air to said chamber.

704,296. Automobile. Jackson D. Carrington, Newcastle, Penn.; John S. Whitla, ad-



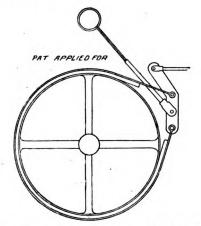
IF A BRAKE BREAKS

ALMOST ANYTHING MAY HAPPEN.

You may think your present brake is efficient. If you have this one you know it is.

The difference between thinking and knowing

The difference between **thinking** and **knowing** ought to be vital to you Better be sure than sorry. Better write us.



NEW JERSEY AUTOMOBILE CO.,

8 Central Avenue,

NEWARK, N. J.

ministrator of said Carrington, deceased. Filed January 24, 1902. Serial No. 91,069. (No model.)

Claim.—1. In a running gear, the combination with the rear axle and interior gears mounted thereon, of a pair of hounds secured to the axle and having inwardly projecting forward ends, a pair of braces secured at their rear ends to the said axle, and having their forward ends connected together and arranged between the forward ends of the said hounds, means for securing the forward end of the braces and the hounds together, a swivel connection secured in the forward ends of the said braces, a driven shaft journaled in bearings secured to the said hounds and having square end portions, pinions slidably mounted on the ends of the said shaft, means for independently operating said pinions into and out of engagement with the said interior gears, and means carried by the said driven shaft to rotate the said pinions, substantially as described.

704,303. Reversible Galvanic Battery. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Company, a corporation of New Jersey. Filed January 8, 1901. Serial No. 42,514. (No model.)

Claim.—1. In a reversible galvanic cell employing an alkaline electrolyte, an oxygen storing element therefor comprising an intimate mixture of finely divided oxid of mercury and an inert flakelike conducting material, substantially as set forth.

rial, substantially as set forth.

2. In a reversible galvanic cell employing an alkaline electrolyte, an oxygen storing element therefor comprising an intimate mixture of flake graphite and oxid of mercury, substantially as set forth.

704,305. Electrode for Batteries. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Company, a corporation of New Jersey. Filed May 17, 1901. Serial No. 60,661. (No model.)

Claim.—1. An electrode for a galvanic battery, comprising a support, a plurality of pockets or receptacles carried thereby and arranged in substantially the same plane, each pocket or receptacle being made of elastic metal with corrugated walls, and an active material in said pockets or receptacles, substantially as set forth.

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A Pullman Sleeping Car of latest construction is now attached to New York Central train leaving Grand Central Station at 4:00 p. m., daily, running through over the Michlgan Central Station, arriving at Grand Rapids at 12:55 p. m., next day, connecting in Union Station for all points in Western Michigan. For information and sleeping car reservations inquire of New York Central Agents.

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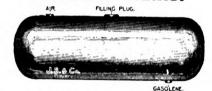
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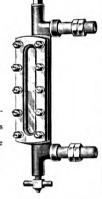
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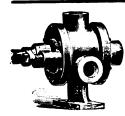


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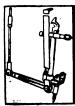


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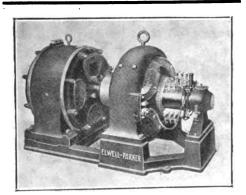
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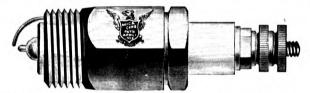
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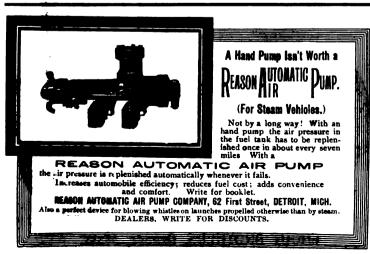
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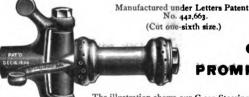
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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, July 24, 1902.

No. 17

ENDURANCE RUN PLANS

Contest — Late Date Probable.

Following the endurance run of the Chicago Automobile Club and the track races of the Long Island Automobile Club, both scheduled for next month, the annual fall contest of the Automobile Club of America will take place. It will be, as it was in 1901, the most important fixture of the year, and in this respect occupies a position very similar to the trials of the Automobile Club of Great Britain.

The Endurance Committee of the Automobile Club of America, consisting of W. E. Scarritt, G. B. Chamberlin and J. A. Hill, will meet this week for the purpose of making arrangements for the contest,

As yet no official action has been taken in the matter, but that there will be a contest, that it will extend over six days, and that the route will be to Boston and return has been practically settled. As long ago as last winter the project was broached, and since then the main features of the run have been decided upon. It only remains to arrange the details and make official mention of the club's intention.

Although the time has not been set, it is almost certain that the date will be later than it was last year. Late in September or early in October—more probably the latter—is almost certain to be the time. It is thought that in this way the equinoxial storms will be avoided and better roads secured.

There is talk of going to Boston by one route and returning by another. If this is done the shore road will be followed in one direction, but if not the route will probably be by Bridgeport. New Haven, Hartford, Springfield and Worcester, both going and returning.

The International Automobile & Vehicle Tire Co. are now nicely settled in their new plant at Milltown, N. J. The old works at Newton Upper Falls, Mass., have been closed indefinitely.

Steam Vehicle Co. Meeting.

On July 30 a meeting of the creditors of the Steam Vehicle Co. of America will be held at the office of C. H. Ruhl, referee in bankruptcy, 534 Washington street, Reading, Pa. A report prepared by the Trustee of the Steam Vehicle Co. will be submitted for action.

It recommends the operation of the plant for the purpose of completing vehicles on hand, in various stages of completion, and asks permission of creditors to raise money for said purpose. Attached to the report are estimates of the costs and the probable advantage to the estate of such operation, and praying that the report be submitted to the creditors for their action.

Debating the Paris-Bordeaux.

Public opinion is still very much divided in France on the possibility of the Paris-Bordeaux race taking place this year. Baron de Zuylen, chairman of the Auto Club de France, thinks that the Paris-Vienna race has cost enough to the big manufacturers, and some of them cordially agree with him; but there are those who say that the Paris-Vienna race has been no criterion, on account of the bad roads and incomplete arrangements; besides, a great many people seem anxious to have it.

To Honor the Cup Winners.

Yesterday (Wednesday) was the date set for the reception to be given by the Automobile Club of Great Britain to Messrs. Edge and Napier, the driver and maker, respectively, of the Bennett Cup winner. It was expected that the new Premier, Mr. A. J. Balfour, would be present. The new Prime Minister, curiously enough, was elected a member of the club last week, on the very day it was officially announced that he took office.

Rhode Island Club's Race Meet.

The board of governors of the Rhode Island Automobile Club at a meeting held last Wednesday in the clubrooms, at the Crown Hotel, decided to hold a race meeting at Narragansett Park next September. Tentative plans are now progressing to repeat the great success of last year, and it is hoped to give even a bigger meeting.

NIEMANN IS SUCCESSFUL

In Clearing Merrick Road of Automobiles— Suffolk to Begin Crusade Also.

If it be true that General Smith wished to have Simar made a "howling wilderness," he was much less successful in accomplishing his purpose than is Trapper Niemann of Nassau County, this State.

The latter has pretty effectually cleared the Merrick Road and other one time favorite resorts of motor vehicles of this class of traffic. On Sunday the first named road presented almost a deserted appearance, as far as they were concerned. Horse-drawn carriages and pedal-driven bicycles traversed it as usual, but motor vehicles were conspicuous by their absence.

As the "pickings" dwindled down, however, the eagerness of the vindicators of the law to apprehend any breakers thereof—and incidentally to appropriate their flines—increased.

No motor vehicle was too insignificant or moved to slowly to escape. Ostensibly, eight miles was the legal limit, but as a matter of fact, almost any old speed was sufficient to cause the Abes and Joshes to pull out their silver timepieces and pretend to figure how many seconds it took the vehicle to cover an assumed eighth of a mile. As both the distance and the time were calculated by these men, the game was a very one sided one, almost invariably resulting in the operator being stopped and told he was "it."

Nevertheless, the catch was surprisingly meagre, one account placing that of Sunday at two automobiles and three motor cycles.

Taking advantage of the fact that automobilists have given Nassau County the cold shoulder wherever possible, District Attorney Livingstone of Suffolk County has bestirred himself.

He has staked out courses on the roads in his baliwick, and is preparing to follow the example of the Nassau County official. Suffolk County contains many of the south shore resorts within its limits and is a favorite stamping ground for automobilists. Consequently many arrests may be looked for there.



LEARNED THE LESSONS

Of the Recent Race, has the French Trade, and Fully Digested Them.

French Bureau Motor World,
2 Rue d'Abbeville.

Paris, July 11.-Of the many surprises cropping up in the Paris-Vienna race there was none greater than the surprise of manufacturers at finding out the sort of test to which their vehicles were to be submitted. They built their carriages to a certain spec!fication which had been calculated for moderately good roads, as the term is understood in this country of magnificent highways, and being obliged to bring the vehicles within the new weight limit, they had to aim at giving greater solidity by scientific construction to allow of the weight being sacrificed to power. The problem was an extremely interesting one. They turned out more powerful and lighter automobiles than had ever been constructed before-vehicles weighing 2,200 pounds and less, and propelled by engines of 70 and 80 horsepower. It was a bold and risky experiment, and many a maker felt that he had gone a little too far when he learned the character of the course over which he had to race his carriages.

EXPECTED TO PASS THROUGH BAVARIA.

At the time arrangements were carried out for Paris-Vienna it was understood that the course would lay through Bavaria, where the roads are good and the conditions would be very similar to those in the Berlin contest last year, but as the promoters could have no choice in the matter, they struck a course through the Tyrol and over the Arlberg, with roads of a very primitive character, and so bad as to test the solidity of the most strongly built vehicle. For a good part of the year the road lies under snow, and during the thaw is cut and scored by deep ruts, and the only attempt at repairing seems to have been made in view of the race; when the ruts were levelled by the laying down of loose stones. The first vehicles threw these stones all over the place, and those following had a terrible time slipping over the ever shirting surface. How would the light, powerful racing machines get over such a course? Jumping and rattling, bounding and twisting, and bumping of frames on axles, the automobiles had an awful time of it on the dangerous roads which offered pitfalls at every turning. On the steep down grades, some of them one in five, the brakes got so hot that water had to be poured over them. And this was a race!

It was believed that the Tyrol would see a perfect holocaust of automobiles, and so, in a sense, it did. Dozens of vehicles broke down or smashed up or fell over precipices, but singularly enough there was not a single fatal accident to the drivers or the public, and the anti-automobilist, if he still exists, is unable to find a single peg upon which to

hang his usual screeds against motor vehicle racing. Carriage accidents count for nothing so long as life and limb are safe, and these accidents, though serious enough, were, nevertheless, nothing like so numerous as had been expected. There were 134 vehicles starting from Champigny, and about seventy succeeded in reaching Vienna, so that less than fifty per cent of failures may be regarded as very satisfactory, in view of the exceptionally trying conditions of the race.

TALES OF TROUBLE.

The lurid accounts given by the drivers of their experience on the road were less cloquent than the appearance of the vehicles themselves on their arrival in Vienna. There were very few that came through without damage. One of the Panhards was in good condition, but another had the back of the carriage body broken away, and the pump was tied on with wire, and the bonnet was also fixed on with a strap, owing to the hinges being broken. C. Jarrott's Panhard came in a wreck on the low speed gear, with the clutch pedal broken, the gear box smashed, and without the muffler. The vehicle made a sensational entrance into Vienna to the accompaniment of a noisy exhaust and a huge cloud of dust. The back of the Napier was broken away through the jolting on the roads, and the Mors looked as if it had come into collision, while a Gobron-Brillie was battered and damaged. The light springs on many of the vehicles had suffered badly, and in several cases an attempt was made to protect the springs by interposing blocks of indiarubber or else fixing pieces of tire on the top of the springs to serve as buffers for the frame.

LIGHT CARRIAGES SCORED.

The light carriages came through the ordeal much more satisfactorily than the big vehicles, and this may be explained in a large measure by the lower proportion of power to weight as compared with heavy automobiles. In the vehicles weighing 1,430 pounds and less the motors rarely exceeded 25 horsepower, and the winner, Renault, had an engine of 16 nominal horsepower and developing about 22 horsepower, while in the carriages of 2,200 pounds the engines ran up to 80 horsepower. Again, in the light carriages the power is undoubtedly utilized much more economically than in the big automobiles, and the solidity of the racing machines is proportionately greater at the same time that the power is used to better advantage. The importance of this adjustment of weight to power was also seen in the experience of some of the drivers of big vehicles, who complained that owing to the lightness it was very awkward to race around corners, as the huge engines had a tendency to send the carriages off at a tangent and there was not sufficient weight to give them steadiness and stability.

One of the interesting features of the race was the comparison between the French vehicles and the Mercedes. The Daimler Motor Company, of Cannstatt, did not enter any vehicles, on the ground that their new types

of racing automobiles were not ready, and there were consequently only five of the old 40 horsepower carriages in the race driven by private owners, that is to say, Mr. W. K. Vanderbilt, Mr. Foxhall Keene, the Hon. C. S. Rolls, Baron de Forest and Count Zborowskl. Mr. Rolls knocked over a tree and smashed up his vehicle, and both Mr. Foxhall Keene and Mr. Vanderbilt retired, the latter in company with Baron Henri de Rothschild, who had fitted up his Mercedes with medical requisites and returned to Paris after an accident when his mechanician was unfortunately killed. There were consequently only two Mercedes left in the race. Baron de Forest lost a couple of hours on the first day, but his run through the Tyrol was such a marvellous one, beating the next vehicle by nearly an hour, that he had a good chance of finishing well in the first flight. This chance was lost a few miles from Vienna, when the Baron smashed the gasoline tank through jumping over a gutter across the road, and his automobile had to be ignominiously drawn into Vienna by horses. Count Zborowski, a Polish gentleman, who has long been an ardent automobilist, did much better and reached Vienna second after the Renault light carriage. He appeared to have won by a big margin in the heavy vehicle class, but was penalized for not staying his full time in a neutralized town in Switzerland, and was put down fourth in this category.

MERCEDES VERSUS PANHARDS.

Though the Mercedes were beaten the incidents of the race nevertheless showed that uthey were much more suitable for bad roads than the new powerful French vehicles. The weight being higher in proportion to the power developed they are stronger and more reliable, and they travelled at appreciably greater speeds than the Panhards on the Austrian roads. In fact, the speeds of the big French vehicles were altogether disappointing. M. René de Knyff's average of something more than sixty miles an hour between Paris and Belfort was pretty high, but it is not better than had been done on previous occasions, and as the vehicles were built for still higher speeds it may be said that makers have at least partially failed in their experiment. The cars may be able to travel much faster, and at the rate Fournier was going with his Mors before he broke down it is quite easy to believe that they are phenomenally fast, but unfortunately in this race, where reliability counted for everything, they were not able to show maximum speed qualities. We are thus left in the dark as to whether the French makers have been working along the right lines in trying to increase speed by augmenting the powers of their motors with a diminution of weight. On the French roads they may be successful in doing what is expected of them, though even in this case it may be questioned whether the vehicles can be driven at the full rate for which they are geared, except it may be by a few exceptionally clever professionals; but if the full power can only



be utilized under these rare and special conditions it may be asked what is to be gained by continually adding to the power of the engines. With such speeds as are nowadays obtained with racing automobiles it is clear that any increase of speed means an enormous augmentation of power, and as the speeds increase the ratio of power becomes still higher until a limit is necessarily reached. The Paris-Vienna race has failed to show whether we have yet reached this limit, but everything in this great event certainly proved that we are very close to it—at all events, under the new regulations limiting the weight of vehicles.

RELIABILITY WILL BE LOOKED AFTER.

The race is likely to do one good thing in turning the attention of makers more in the direction of reliability. They see that the conditions of motor vehicle traffic abroad are by no means so good as they are in their own country, and that by designing automobiles solely for French roads they may run the risk of producing vehicles unsuitable for the foreign trade. The engines and transmissions are satisfactory enough, as there are only comparatively few cases of machinery breaking down in the race; but the frames and carriage work, in which weight has been cut away, were quite unable to stand the strains, for scarcely any of the vehicles got to Vienna without being more or less damaged. The event has shown that with high powers and low weight racing is too much a question of luck. The success of the light carriages is not likely to be lost on makers, who have seen that well and strongly constructed carriages are of quite as much importance as good machinery, and that a proper adjustment of weight to power can alone produce a satisfactory and reliable automobile. The race has been valuable because it has touched a weak spot in automobile construction. It is likely to put an end to the craze for abnormally high powers, and if this be followed by more attention to solidity and reliability the industry will gain considerably thereby.

REVIVATOF RACING.

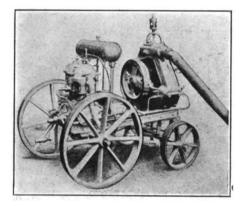
Another useful result of the Paris-Vienna event is that it seems to have opened the way for a revival of motor vehicle racing, first, because it was carried through with perfect safety to the public, and the authorities have come to see that a race can be organized without the slightest danger, and then it has become perfectly evident that such contests are of the greatest importance to the automobile industry. It has been full of lessons which will be turned to good account by French makers, and it may safely be said that the event has savell manufacturers many months, and even vears, of experiment, and has shown them the errors of a policy which might have prevented the industry from developing in the way it should. Already a race has been organized in Belgium, where a circular course has been selected giving a total distance of 318 miles. As there are no towns or villages along the route, the vehicles will be able to race from start to finish without the troubles and inconveniences of neutralizations. There is also some talk of reviving the classic Paris-Bordeaux race, but after the expense of Paris-Vienna makers think that this can very well stand over until next year.

Motor Fire Engine That is Useful.

Motor fire engines, in which the propelling of the vehicle as well as the pumping of the water was done by the motor or motors, have long since ceased to be a novelty.

To use a motor for the latter purpose alone is less usual, however. The portable engine shown, one of British manufacture, is not, of course, intended for use in cities having regular fire departments, nor even to supplement the engines themselves.

It has been designed to meet the want for a small, powerful fire engine which can be started in a few minutes, and it will be par-



ticularly suitable for use in country houses where other cars are kept, as the engine, having a motor of similar pattern, will be readily understood by the owner or his servants.

The fire engine can, of course, be put to many other uses besides that of fire extinguishing. Ordinary pumping of water to tank, the watering of lawns or spraying of trees, driving chaff cutters, and a dozen other uses can be made of the machine.

The motive power is supplied by a standard pattern 6-8 horsepower Simms engine, with the Simms-Bosch magneto electric ignition. This drives the pump at the forward end of the fire engine frame by means of friction clutch and toothed gear. The capacity is fifty gallons per minute, and the pump will throw a jet 100 feet high.

Price of German Alcohol.

Denaturalized alcohol sells in Germany for but little more than gasolene does here. The price is 15 marks per hectolitre, or about 13½ cents per gallon. At this price it competes economically with steam and all other forms of motive power energy in engines of less than 20 horsepower for threshing, pumping and all other kinds of farm work, so that a large percentage of the spirit produced in agricultural regions remote from coal fields is consumed in the district where the raw material is grown.

THE CITY BEAUTIFUL

How Broad, Smooth and Direct Roads Would Work Wonders—Some Examples.

It is pleasing to dwell upon that wide horizoned idea, a Grand Transcontinental Highway from Ocean to Ocean, and still more pleasing to note that an influential body has been formed to in every way possible progress the idea and make actual the grand white stretch from blue Atlantic to softly-glowing Pacific. I say this is well, for even if nothing practicable be accomplished—it is rather a large order, the business of many, not of one—we shall at least have agitation and it will still further sow the seed of good roads doctrine. Therefore, success to the Grand Transcontinental, etc.!

And the birth of an organization to exploit this national project is a keen reminder that right here in Gotham we have room for still another public-spirited body whose work, important, pressing and specific, lies readyripe at hand. A body, in fact, to properly open up New York, to make egress pleasantly feasible, to make ingress a simple, noncomplex operation, and, above all, to oppose usurpation of the highways. On the one hand this organization might be entitled, "Society of the Open Door," and, on the other, it might properly be called, "Anti-Interurban R. R. Association." For it is this latter octopean corporation which takes our best ways and either closes them up or makes them perilous.

Let us glance at this great city of ours, birdseye fashion. New York, with its City Hall as the heart, and Paterson, the Oranges and Elizabeth-Plainfield as the outer circle of the cobweb, means an intercommuning body of some six millions, and surely the highway ease of these myriads is worthy of great price. In New York, downtown below 110th street, the whole scheme is torturous. Many things might be done to mend matters in this congestive part, to fetch it up to the requirements of the motor era. For instance, a fine broad avenue from 14th street north, tree-lined, for pleasure vehicles and the promenade. Many other cities have such have, at least, one leafy road penetrating into the heart of the city. But this is considered merely an ideal froth-idea of the dreamer, so we mention it apologetically and pass on to the upper part of Manhattan Island, where there are still possibilities. From 110th street north New York is yet more or less open, and in this section there should be set apart one, two or three highways, decorative, picturesque and inviolably and permanently held for vehicular and pedestrian use. These highways would reach to the Harlem, that ribbon of sickly water which really divides town from country.

And right here we wish our body to come to a full stop. Here is work for an organization of public-spirited men, riders, drivers, walkers, horse-driven, motor-driven, leg-

"JERSEY JUSTICE "

Acquires a new Meaning to Automobilists Badgered by Pestiferous Speed Laws.

Following Long Branch's edict that six miles is as fast (?) as an automobile can legally go, Seabright, its neighbor to the north, raises the limit two little miles and evidently thinks it is liberal. The Seabright Councilmen, who passed this eight mile ordinance, are of one mind, however, and automobilists of quite another.

The residents of this and other nearby summer colonies are up in arms against the new rule, which they denounce as totally against the laws of common sense, in that the speed limit is absurdly low and is calculated to destroy all pleasure in automobiling along that section of the coast.

Special bicycle policemen, paid by private subscription, have been stationed along the Ocean Driveway and the Rumson Road at Seabright, and automobilists state that they have been made the victims of petty annoyances at the hands of these watchers, who jump out at them from behind bushes and trees and follow them for long distances on their wheels, in some cases holding on to the automobiles and giving directions to the owners.

Indignation among many owners of motors has steadily been increasing as the result of these actions on the part of the watchers, and reached a climax one day last week, when Walter Watson, jr., a prominent resident of Monmouth Beach, while running his car to Seabright, was arrested a short distance within the borough limits by one of the special policemen, who asserted that he had been running his machine at the rate of seventeen miles an hour shortly after crossing the line, although he acknowledged as the machine approached him it was going within the limit.

In spite of this protest be was arraigned before Justice of the Peace Bedford, of Seabright, who gave him the alternative of paying a fine or giving bond for his appearance next day at Freehold, N. J., where he could appeal the case.

Mr. Watson indignantly refuted the charge and told the justice that no one watching an automobile approaching in the distance could tell whether it was going at the rate of eight or eighteen miles an hour, but in spite of his protests he was compelled to pay a fine of \$11.50 rather than lose a day from his business by going to Freehold.

Lenox Says " Me Too. "

At Lenox, Mass., too, a war against automobile speeding is to be begun. Last week the Lenox Club, representing the wealthy cottagers of the famous Berkshire resort, issued the following notice, and has posted signs at the Lenox Club, Lenox Golf Club and Lake Mahkeenac Boating Club, forbid-

ding automobiles on the premises. The notice reads:

"The Lenox Club has had its attention called to the effect of the use of the highways by automobiles, and feels constrained to take action in the matter. A feeling of general apprehension is prevalent, and the result is that in the case of a large number the use of the highways for ordinary driving has become so dangerous as to be practically forbidden. Under the circumstances the club begs that in the case of its members they will show the greatest possible consideration, and declares that for all violations of the existing Massachusetts statutes there should be the most vigorous prosecution.

"Resolved, That for the first ten convictions for a violation of the Massachusetts statute in Lenox, from this time to October 30, 1902, the club will pay a reward of \$25 each to the person securing the conviction on a certificate from the court in which the conviction takes place."

His Opinion of the Road

In spite of bad roads through this State R. B. Holmes, who, with his wife and daughter, are on tour in a Panhard, are having a pleasant journey. They left this city about two weeks ago, and came up the Hudson by boat and went to Saratoga, where they remained until 10 a. m. Saturday. Little Falls was reached at 7:30 that evening, and, after remaining there until 9:35 Sunday morning, the party went to Utica, which was reached at noon. A stop of several hours was made for lunch and then they went to Rome. They left Rome in the morning and arrived in Syracuse about 3 o'clock.

Mr. Holmes said that it is outrageous that the roads should be in such condition as they are through the Mohawk Valley. He thinks that taxes enough are paid to afford tourists good highways. He stated that the party is going by easy stages to Buffalo, whence the return trip will be commenced by way of the southern coast of Lake Ontario to the Thousand Islands and thence home.

Hands Differ in Size.

"It does not seem to occur to many makers," complains one fair chauffeuse, "that a woman's hand is smaller than a man's. Even if they had not noticed this interesting point in the ordinary course of things, a commercial desire to please their clients might have led them to devote some study to the subject. However, now that their attention bas been directed to the fact that a feminine hand is less expansive than their own, a point which the sceptical may investigate if they wish, perhaps they will abstain from putting levers on women's cars which are inaccessible to the rider's grasp. Repeatedly, even on the highest class vehicles, one finds levers which the fair rider can only reach with difficulty. This is more particularly the case with the longer levers, which are placed accessibly enough for the male grasp, but at an awkward distance for women riders."

driven, for, at the end of Seventh avenue, that beautiful viaduct, that principal open gateway to the country and to freedom, is to be seized and the trolley is to be laid there. What a crime! What a steal! The city built this beautiful, aeriel, ornate steel thing. The Interurban Street R. R. Co. comes along and seizes it, or will at no distant date. In any sane and honest community the Interurban R. R. Co. would cross the Harlem in one of two ways, would build itself a bridge, or better still, would tunnel the river. Under the guidance of a gentle, intelligent despot, the R. R. would help itself, it would never seize and possess the public highway.

This same is true of that part of the viaduct which runs up to St. Nicholas avenue and forms an important arm of the thing, as all f lks bent on suburban outings know. This also is to be car-tracked. So, our body of highly influential men might, as a preliminary exercise, nail up its flag at the entrance of this viaduct and say stertorously: Positively no cars here; go over the river or under the river your own way; the public need the trolley extension; it's a long walk on a hot day and an unpleasant one on a cold day. All this we know; but, under Heaven, this gateway must remain to the people and you may throw your own structure over the river or pierce the stream with a milk-white tunnel, which latter is the prettiest and profitablest scheme. Such would be the method under a gentle, intelligent despot. But we have no gentle, intelligent despot at the helm-merely red tape, bureaus, politics and the itching palm.

Here is a creed for the local influential body. Here is a pretty bit of work ripeready at hand. And beyond this there are two score other matters that will suggest themselves, plans that will make for intelligent and modern handling of city traffic, plans that will take into view the new motor era that is come upon us; plans the realization of which will largely benefit the vehicular tribe and will valuably conserve the interests of all the sons of Manhattan and its environs.

P. F. P.

The Cause of all the Trouble.

"Possibly the automobile is getting a bad name partly through the professional chauffeurs." suggests the Sun. "They come from France, and, though that is an admirably regulated country, we suspect that the chauffeurs it exports, when they get into our atmosphere, become just a little autocratic and indifferent to the rights of the public. When the chauffeurs' seats come to be occupied by American citizens, much of the odium, or, rather, terror, that now attaches to the automobile will be done away with."

If the Combustion is Imperfect.

Imperfect combustion will cause a deposit of carbon in the cylinder and the exhaust passages. Carbon will also deposit from an excessive amount of lubricating oil when this is but partially consumed.





Published Every Thursday By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING 154 Nassau Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Paris Office, 2 Rue d'Abbeville,			
Subscription, Per Annum [Postage	– Pa	ıd]	. \$2.00
Single Copies [Postage Paid] .			10 Cents
Foreign Subscription			\$3.00
invariably in Ad	vai	zce	

Postage Stamps will be accepted in payment for subscriptions, it not for advertisements. Checks, Drafts and Money Orders could be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy refer is in hand on SATURDAY preceeding the date of

Those who are interested in motor vehicles will find the sa and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address Motorworld.

Entered as second-class matter at the New York, N. Y. Post Office, November, 1000.

NEW YORK, JULY 24, 1902.

One Cause of the III Feeling.

One of the most marked features of the present summer is the presence of automobiles in large numbers at nearly all the vacation resorts.

In some of them they fairly divide honors with the horse drawn teams. In conspicuousness they go a long way ahead of the latter, even the showiest, most imposing or handsomest of them. And in speed and the ability to thread their way through heavy traffic the equine turnouts are hopelessly outclassed. Truer grounds for grievance against the motor vehicles are found in their noise and smell, together with the undoubted recklessness of no inconsiderable number of their operators.

Just at present this great increase in the number of automobiles heightens the feeling against them.

When they were fewer horses were unaccustomed to them and resented their presence much more than they do now; but as a

driver rarely met a motor vehicle then, this evened matters up and gave time for his anger to subside between experiences.

When motor vehicles become as common as those drawn by horses it will be only occasionally that the latter will take offence at their presence and cut up all sorts of "high jinks." They will bring their equine intelligence to bear on the subject, and, recognizing the futility of resistance, make up their minds to get along as amicably as possible with the unwelcome intruder.

Meanwhile, pending this process of getting used to each other, the horse and the motor will continue to wage more or less bitter war, and their masters to take sides with them.

Friction will result, and the present tidal wave of anti-automobile legislation is but one phase of the matter.

Adjustment will come ere long, and until that time arrives there is nothing to do but to grin and bear Quixotic ordinances which cannot be bowled out until they reach the last stage of absurdity.

Racing for Cash or Plate.

"Cash or plate" is the slogan of the Long Island Automobile Club in its race meet campaign now being prosecuted. Those automobilists who are "out for the stuff" can have it for the asking-provided, of course, they first win it. Contrariwise, the "simon pures" can take theirs in plate if they so elect.

In this connection it is interesting to note that neither the word "amateur" nor its mate "professional" appears in the racing rules of the American Automobile Association. In other words, there is no amateur rule and no distinction made between amateurs and professionals. They may compete together, take cash or plate or do anything else they want to, their own sweet wills being the sole arbiters in the matter.

That there is something anomalous in the studied avoidance of this bone of contention in other sport promoting bodies is evidently felt, however.

It was only after having "deliberated at considerable length" that the Long Island club decided to allow cash awards. The bright thought that these would "go far toward compensating owners for outlays involved in getting their cars into racing trim, and to compensate them for the expense involved in transportation," occurred to them at last, hence the concession.

All of which is rather funny. Does it

mean that automobile racing is balancing itself between the two camps which divide almost every sport in existence, ready to drop over into either? Are there no "gentlemen drivers," or do they deem it consistent with their position as such to accept money to repay them for outlays made?

The answers to these and a host of similar questions which suggest themselves readily would be interesting.

No New York in His.

"Thank God, I live in Connecticut!" was the cry of Chairman Jonathan Godfrey of the board of governors of the Automobile Club of Bridgeport upon reaching his home after a little experience with the law as interpreted in Nassau County, this State.

It was Mr. Godfrey's misfortune to venture down on Long Island in an automobile. The latter is not one of the "Red Devils" or "Yellow Deaths" of which we hear so much, but a car of American manufacture, and built purely for road work. Its owner is one of Bridgeport's solid citizens, prominent in a club distinguished for its strict observance of the laws regarding automobile speeding, the maximum limit being twelve miles an hour in Connecticut. In a State where fifteen and twenty miles are allowed, therefore, Mr. Godfrey thought it was quite safe to adhere to his accustomed twelve miles.

Several hundred miles were covered by him in a little trip he made through parts of Connecticut and New York. Having heard much of that "paradise of good roads," Long Island, he determined to sample the much vaunted highways.

As told to a reporter of the Bridgeport Post, this was his experience when near Freeport:

He was out in the suburbs and did not know he had reached the town. There were no signs to show the town boundary. There were no horses and few houses in sight. Suddenly a squad of men rushed out from a clump of trees waving a red flag and shouting something. The Bridgeporter thought at first that a blast was about to be fired, but when he slowed down he was informed that he was under arrest, and a red whiskered farmer with a silver star on his breast piled into the car, saying he was the constable.

The party went to the centre of the town, where a justice held court. Mr. Godfrey was charged with wilfully violating the law, but he would not plead guilty to that charge and the charge was modified. The justice

was quite reasonable, and instead of placing the fine at \$50, as he could have done, only imposed a fine of \$15, which Mr. Godfrey was glad to pay and shake the dust of the town from his feet.

Lucky Mr. Godfrey! He can remain in Connecticut and indulge, in a rational manner, his liking for automobiling, safe from insult and arrest, with subsequent mulcting in good, round sums.

But those of us who are compelled to make use of Long Island roads are less fortunately situated. We must be singled out from the great mass of road users, harassed and badgered until an automobile life seems no longer worth living, and then "run in" even when we crawl along and do our best to conform to archaic regulations, misconstrued by a purblind lawyer and enforced by a band of country loafers who are pressed into service for the nonce by promising them part of the spoil.

But baiting is a dangerous as well as an exciting pastime, and Baiter-in-Chief Niemann may some fine day awaken to the fact that he has been a too successful trapper.

Should be Bitterly Resisted.

At almost every turn the motor vehicle is harassed and badgered, quite as if it were some baleful monster the presence of which is inimical to the peace and well being of the community.

One of the most irritating and vexing blows aimed at it comes from Chicago. One would think that that city had gone far enough in the way of restricting and hedging in the automobile. Its regulations are, perhaps, the severest of any city in the world, requiring each prospective motorist to go through a star chamber seance that is as disagreeable as it is unnecessary. Most people would imagine, therefore, that the present laws go far enough.

But it is now proposed to tread on much more dangerous ground. The method of construction of automobiles is to be dictated, in one particular at least.

Each motor vehicle, so the proposed ordinance states, must be equipped with two independent working brakes. If this is not done a license is refused, or, if already granted, withdrawn. When the car has been made to conform to the regulation, then the matter of the granting of a license will be considered.

Such a measure is almost wholly bad. It is the entering wedge for similar enactments which, once begun, will end no one knows where. With such a measure for a precedent, others, running the gamut from harmless to positively mischievous, are almost certain to follow. We would all rue the day when city officials turned automobile designers and compelled makers to put on or take off anything they liked or objected to.

But the independent brake plan itself is not without objectionable features.

There is no harm in fitting an extra brake if the maker or user desires. It may on rare occasions result in some good being done. But it is much more apt to become a trap for the confiding operator, a delusion and a snare if regarded as a ready method of stopping.

In theory two brakes are better than one. But practice is likely to bring about an altogether different condition of affairs. The possession of the spare brake will breed carelessness regarding its mate. The latter will be permitted to go without the little attention it needs, reliance being placed on the extra one to help out if occasion arises. The result is likely to be a falling between two stools, neither brake being "keyed up" to its work.

The worst feature of the measure, however, lies in its lack of necessity and the bad precedent involved.

Brakes of ample power and undoubted efficiency should be fitted to all motor vehicles. But one good brake is worth a dozen poor ones, and when the pinch comes will be found of vastly more use.

As is well known, the engine itself forms a good brake. By reversing or even by simply allowing the inertia of the motor to retard the speed the object is often attained. A satisfactory brake, time tried and tested, in addition, is all that should be required.

Baltimore has a Plan.

"It is to laugh" indeed when we read such balderdash as that indulged in by the Baltimore Herald and reproduced elsewhere.

By its own confession Baltimore has been singularly free from automobile accidents, but what of that? An ounce of prevention is worth a pound of cure, and to that end the new car of progress is to be so hedged around with restrictions that its wheels will be effectually blocked.

After coolly asserting, without a shadow of proof, that in all other cities "chauffeurs have to qualify and take out an engineer's license," the Herald goes on, in entire good faith and all seriousness, to suggest the use of fenders.

Street cars have to carry fenders, so why

not motor vehicles? They need them much more, for the trolleys cannot leave their track, while automobiles go anywhere. The natural thing to do, therefore, is to make it compulsory for the latter to have fenders attached to them. What the "yellow" World months ago suggested in jest the Baltimore paper now contends for in all soberness.

As the possession of such ornamental appendages would enable the devotees of the "sport" of automobiling to enjoy it more, they can scarcely be expected to raise objections to the proposed regulation.

All of which leads us to wonder if the Herald's funny man has not been placed in the editorial chair for a while. Certainly the author of the screed never rode in an automobile; it is doubtful if he ever saw one.

Speed Laws Touch him not.

In one respect at least we find it hard not to envy the King of England. When the autophobes press us closely with six miles an hour ordinances, or waylay us on lonely stretches of road and snap stop watches—save the mark!—on us, we can best appreciate the position of the King.

He is above and beyond the law. "The king can do no wrong" appears to be literally true even in this twentieth century era. The correspondent of an English journal calls attention to this fact, anent the assertion that the King habitually exceeds the legal limit, which in England is twelve miles an hour, saying:

"There seems to be a little misunderstanding about this point. If the King drives himself (i. e., actually manipulates his own car), with no one else with him, he breaks no law, no matter what speed he goes at, for it is a constitutional principle that the King is above the law, and the only method of restraining lawless acts performed at the command of the sovereign is to prosecute his ministers. Of course, if you wish, you can proceed against his driver; but there is no court of law which has jurisdiction over the sovereign."

That is, it must be confessed, a very comfortable position to occupy. It must be admitted, therefore, that royalty has some compensations for the many irksome restrictions which hedge it round.

British automobilists are rejoicing in the elevation of A. J. Balfour to the Premiership, Mr. Balfour being a keen automobilist and being heartily in favor of greater privileges being granted to motor vehicles.





It does not require other than the most superficial acquaintance with the American public to tell when that same public begins to tire of anything. By all the marks and tokens of tiredness the public is fast growing aweary of the persecution of the automobile, which, starting in all seriousness, has now arrived at the absurd and the advertising stage, at which points the public invariably haits and declines to support further attacks upon any one or anything. The climax of Long Island lunacy in automobile baiting was reached when a score of rural officials were induced by a wily press agent to hold up an automobile in which was esconsed a heavyweight music hall singer. The reporters of the New York dailies, who had been duly notified in advance, aided in exploiting the brave doings of the rural law enforcers, and every one was happy at the newspaper stories, which were columns long the next day.

Right here, however, is where the great American public draws the line. When it sees its alleged "rights" and the officers of the law both being used as means for sensational exploitation of fleshy females whose sole ambition in life it is to be sure that the calcium light of publicity is ever kept turned full upon themselves, the public refuses to enact the part of an aider and abetter to such performances, and thus the end of the whole system is plainly in sight. I forget which character it was which Dickens caused sententiously to remark that "the public is an ass," and I am not going to gainsay the truth of the assertion; but the American public has never heretofore been quite ass enough to be used as a dead wall upon which to paste posters advertising the fleshy beauties of fat music hall singers, and I do not believe it will aspire to any such asinine honors at this late date.

One of the greatest mysteries in the world to me is why there are so few millionaires when it is so easy to become one. All you have to do is to become temporarily in command of an automobile. That's all. The police will arrest you on sight, and The Times and the rest of the motorphobic papers will promptly make a millionaire out of you. Each newspaper will have a long story of how you, "another millionaire," ran an automobile through the streets at a speed which nothing but a daring, death defying policeman could surpass. They'll make a millionaire of you, all right, and the magistrate will make the price about \$25, which, as millionaires go, cannot be considered dear, I am Sure.

Experience does not teach, at least it fails to do so with some people. The world is filled with doubting Thomases who will not

believe what they see. It is this unfortunate kind of people which seems to have taken most enthusiastically to automobiling. The result of the taking is. I hope, more beneficial to the latter than I know it has been to the taken-that is to say, in the present instance, to automobiling. Not so very long ago a gentleman whose father is credited with being a millionaire had the misfortune to run a big racing car he was guiding over a child. The child died, and the millionaire's son naid some three thousand or more dollars to its parents as a sort of reparation for their misfortune and his. The case was given wide publicity by the sensational press, so much so that it was really the beginning of that crusade against automobilists which has for its shibboleth. "All automobilists are millionaires; all millionaires despise the poor, and for their pleasure seek to run over and kill the poor!" As a direct result of all this the unfortunate individual was shortly afterward attacked by hoodlums in the public streets, and the lives of his wife and himself were really in danger until help arrived.

This attack, under the influence of the sensational press and its "millionaire" cry. was actually lauded, and the chief attacker was publicly bailed by an unknown sympathizer who believed in this kind of treatment for any and all automobilists. Under such conditions, if experience could do any doceting at all, you would think that it would have no difficulty in finding both docile and heedful pupils in this particular millionaire's family. Well, it didn't. The sister of the young man, far from being either doceted or frightened, bought a big racing car for her own use, and only this week the daily papers had long front page stories telling how she beat some of the fastest motor vehicles and most expert handlers thereof in a race which is said to have extended from the Long Island ferry down the Merrick Road. Was there ever a plainer case of flying in the face of Providence? Was there ever so doubting a Thomas as this one when it came to believing how the public feels toward the racing automobilist?

A friend of mine, who does not own an automobile, and who would not own one if he could afford it, and who therefore cannot be accused of being "a millionaire murderer of helpless children," etc., etc., such as the editorial attackers of the automobile take pleasure in asserting that the majority of the owners of big automobiles are, sent this letter regarding the racing of high powered yachts with the Central Railroad of New Jersey's crack passenger boats to the New York Times last week:

"Editor New York Times.

If the millionaire with a 40 Dear Sir: horsepowered automobile, with a claimed speed of forty miles per hour, should be deemed so dangerous by The Times as to warrant it employing columns and columns of its valuable space in attacking him, why is the millionaire with a 4,000 horsepowered steam yacht, with a claimed speed of forty miles per hour, passed by unnoticed?
"The automobile travelling forty miles per

hour can be stopped in 91 feet (vide the public demonstration on Long Island on Tuesday), the steam yacht travelling at forty miles per hour (?) can be stopped-in what distance? At its worst, and in the hands of the most heartless 'millionaire,' the automobile might kill a score; the racing yacht, in the hands of its millionaire owner, might kill hundreds of people, who would be per-fectly helpless in their inability to get out of

its way.
"It seems to me that to be true to yourself and to your professed desire to protect the public from the speed worshipping millionaires you should oppose this proposed race in New York Bay between high speeded and powered vessels very much more energetically than you did the racing of automobiles. Certainly there can be no comparison as to the relative danger of the two, so far as the public is concerned.

By the next mail his letter to The Times was returned, with the following one from the editor:

"Dear Sir: The difficulty which you seem to find with regard to the racing of two steam vessels, it seems to us, is rather imaginary. So far as we are aware, there are no persons walking on the waters of the Lower Bay who are in any danger of being run down by either one of the two boats. Respectfully.—The New York Times (per H. L.)"

You see, it is only for the safety of the pedestrian this valiant attacker of the automobile is fighting. What danger may threaten the hundreds of people on ferryboats, excursion boats, picnic barges and various other craft which at this time of the year fill the harbor of New York is nothing to this great editor so long as those in danger are not "walking on the waters of the Lower Bay." Verily, the reasoning of those whose boast it is that they print "all the news that's fit to print" is difficult to understand by any one who is less gifted than their editorial selves!

I once heard a man say who had lived in several of the Long Island villages which bear the name of Hampton that these villages were famous not so much for the numbers of the fools who resided in them as for the aggressiveness and the intensity of those afflicted. I recalled this when I read in the daily papers this week that the motorphobes of Bridgehampton had petitioned the Long Island Railroad to debar motor vehicles from the company's station grounds. Just at present the Long Island Railroad is managed by intelligent men, and while, of course, they do all they can to please even those unfortunate, mentally twisted individuals whose temporary obsession is the automobile, there is absolutely no danger of the railroad people becoming in any way copartners with these motor maniacs—a thing all sensible, non-Hamptonitic people are duly thankful for.

The rarest thing there is just now is the man without a Panama hat. Next to the Panamaless chap, and mighty close at his heels in the race for rarity honors, is the county, village, borough, city and State official who has not introduced some fool law aimed at limiting the speed of an automobile to something which would permit of a three legged calf beating it in a canter.

THE COMMENTATOR.



TAYLOR WAS TIMED

By Niemann's Myrmidons and Found to be Going Entirely too Fast.

A welcome relief from the dull monotony of "rounding up" mediocrities who are guilty of exceeding the legal limit of eight miles an hour by fractions came to Trapper Niemann, of Nassau County, on Sunday. Big game fell into his net and was gathered in with the same nonchalance as the smaller fry. The victim was Talbot J. Taylor, the big Wall Street broker, son-in-law of James R. Keene and brother-in-law of Foxhall Keene.

The arrest was made on the Jericho Pike, near Westbury, to which point the active Niemann and his right hand man, Abe Furman, had temporarily shifted their operations.

It was in the afternoon, and Taylor, "who has a place at Cedarhurst, where he keeps half a dozen automobiles besides the 'Crimson Imp,' was speeding along Jericho turnpike.

"Dashing along came Taylor in his lowcut racing machine, accompanied by a prominent lawyer. As they were running through Westbury they came upon a man passing back and forth in the roadway, apparently in deep thought. As they passed him, quick as a flash came a red flag from under his coat, waving a signal to a man one-eighth of a mile down the road.

"With the drop of the flag the second man, who was 'Johnny' Buhler, the constable in Mineola, pressed his thumb on his stop watch and stood gazing across the fields as if he saw something in the distant landscape that absorbed his attention. Not a suspicion entered the mind of the speeding automobilists as to what the man was really doing.

"The red machine dashed past him like the rushing of a great wind.

"Then the constable waved his flag. It was hidden in a cloud of dust, but an instant later a light wind lifted the dust, and 'Abe' Furman, down the pike with another constable and a timekeeper, Willis Seaman, dashed into the road. Buhler came running down after the machine.

"Taylor looked behind and in front, and realized 'what the game was.'

"'An eighth in ten,' said Buhler, who had held the watch for the first distance.

"Taylor was much disturbed. He turned his machine, however, and accompanied the officials to the office of Justice Oakley. His companion searched the law books in the justice's office, trying to find some technicality that would serve as a defence, but could find none. Taylor was fined \$15."

Outside of the one big arrest the day's "bag" was small. It consisted of but one other automobilist and three motocyclists, each of the latter being fined \$5.

The Motor World.

Prizes for the Winners.

The victors in the Paris-Vienna race will not go without lasting mementos of their wild ride. The committee of the Automobile Club of France having the affair in charge has, in addition to the awards of a more substantial character, succeeded in getting together a fine collection of cups, plaques and such like gewgaws.

Peculiarly appropriate is the presentation by the Austrian Emperor of a cup to the first French car and by the French President of a similar prize to the first non-French winner. Many other titled personages figure among the donors of the remaining prizes, a view of the most important of which is given.

PUPILS ARE MANY

At the Lenox School for Horses—Automobiles no Longer Scare Them.

In furtherance of his pet project, the schooling of horses to automobiles, President A. R. Shattuck of the Automobile Club of America, in conjunction with C. F. Bishop, has opened a regular summer school at Lenox. Mass.

The school opened last week. At the first session there were ten horses; on Tuesday there were sixteen; on Wednesday there were twenty-six; on Thursday there were



SOME PARIS-VIENNA PRIZES

Seven of the long list of prizes given to the winners of the Paris-Vienna race have been awarded by the international committee. They are as follows: Emperor Francis Joseph's prize, M. Marcel Renault, as driver of the first French motor car; President Loubet's prize, Count Zborowski, as driver of the first non-French motor car; ladies' prize, Mr. Henry Farman, for having made the second best time (this prize is the one marked No. 3 in the illustration); Prince Furstenberg's prize, M. Marcel Renault, as the first to arrive in Vienna; Count Schonborn's prize (No. 6 in illustration), Mr. Maurice Farman, as driver of the second heavy motor car to reach Vienna; the Margraf Pallavicini's prize (No. 5 in illustration), M. Edmond, as driver of the second light motor car to reach Vienna.

Large orders from England are reported by the Prescott Automobile Mfg. Co., Passaic, N. J. sixteen; on Friday there were fifteen, and on Saturday eighteen, making a total of 101 horses which during the week have been broken in to automobiles.

It is really wonderful to see how quickly a horse in the country, which has really never seen an automobile, can be taught, according to the method laid down in the circular just issued by the club, that an automobile will do him no harm.

Many horses at the Lenox school only had two lessons, after which an automobile was sent past them going at a high rate of speed and with the horn blowing and making all the noise it possibly could, without frightening them.

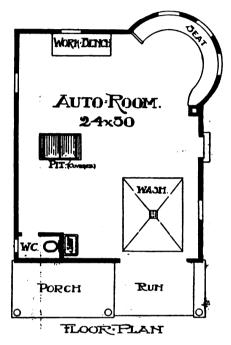
Summer schools for horses are about to be opened in Long Branch, Narragansett and Newport. Secretary Butler has also sent circular letters to every automobile club in America suggesting that they open summer automobile schools for horses.



HACKENSACK'S MODEL HOUSE

For Automobile Storage Purposes—Owner William Morse was Also the Designer.

One would have to go a long way to find as handsome or well designed an automobile house as that shown on this page. In every respect it is the furthest possible removed from the common idea of a stable or even a "garage." Of pleasing exterior, it is also clean and sweet and attractive inside; in short, an appropriate adjunct to a gentle-



man's suburban residence. Such is the building erected by William Morse, of Hackensack, N. J., in which to house his Darracq automobile.

"Automobiling is my hobby, and I wanted a house that would correspond to my idea of the pastime," said Mr. Morse, who is president of the Merchants' Rubber Co., 72 Reade street, this city.

"It cost more than was necessary, of course," he went on. "But what difference does a few hundred dollars make? It was not built for this year only; and in five years the extra cost will seem to be nothing. In the mean time I am getting the extra amount of pleasure out of it.

"This is my second year at automobiling, and I have a Darracq car which is highly satisfactory. I bought it last spring, and about the same time I conceived the idea of building a place to put it in. The house here is the result. It is my own design, and is very simple. After I made the draft of it I took it to an architect and had him draw it to scale. Then I got a builder to erect it for me. I am much pleased with it. Other people seem to be, also, for I have had automobilists who saw it in passing on their way to Tuxedo stop off to ask me to let them have a look at it."

The house is built on a portion of Mr. Morse's lot. It is in the popular Colonial design, having a spacious veranda and runway, the latter giving ample room for the ingress and egress of the car. Inside the arrangements are equally complete. There is a work bench in the corner, a pit with a wooden cover over it, a place for washing the car, a washroom with toilet conveniences, etc. The floor is cemented, and everything is kept as clean as a Dutch kitchen. A window seat and a ping pong table add to the pleasantness and homely

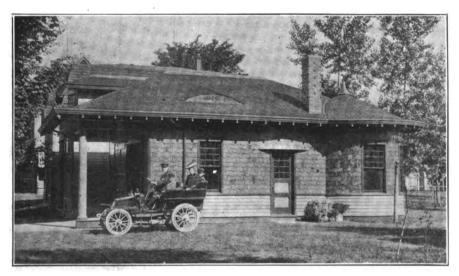
In the rear, at one corner of the house, a metal tank is sunk and filled with gasolene. From it the tanks of the car are filled. The entire cost of the building was \$1,546.

air of the house.

ALDERMEN GIVEN PROOF

Of Ease With Which Automobiles can be Controlled as Well as Operated.

With Aldermen Joseph Oatman and Armitage Matthews as the guests of honor, a series of control and brake tests was given last week under the auspices of Smith & Mabley with complete success. Three automobiles were pressed into service. All were Panhards—one 8 horsepower, owned by L. A. Ripley and driven by George J. De Whiting; a 12 horsepower machine belonging to H. F. Harris, with H. Armour Smith at the wheel, and a big 12 horsepower 'bus, operated by



A MODEL PRIVATE GARAGE.

Eight Miles in Great Barrington.

At a special meeting of the Barrington (Mass.) Town Council held last week the speed of automobiles was discussed, the matter having been laid over from the previous meeting, and the following ordinance was adopted:

"Section 1. No person riding or travelling in or on any automobile, carriage, wagon, bicycle, tricycle or vehicle of any kind propelled by electricity, gasolene, steam, naphtha or any other motor power contained in said vehicle shall cause said automobile or vehicle to move or travel on any street, lane, highway or public square at a rate of speed exceeding eight miles per hour, and shall reduce said rate of speed and stop whenever the occupants or driver of any vehicle drawn by horses or other animals that show fear of said automobile or vehicle propelled by electricity or motor power shall signal them in any way so to do.

"Sec. 2. Any person who shall violate the provisions of this ordinance shall be fined not exceeding \$20 or be imprisoned not exceeding ten days, or both."

A shoe factory at Stoneham, Mass., has been rented by persons whose names are withheld, and is to be used for an automobile factory. Leon Laurier. Among the other guests were W. J. Stewart, chairman of the race committee of the American Automobile Association, and S. M. Butler, secretary of the Automobile Club of America.

The brake tests were made at the end of the afternoon's run through the city and in Long Island over a half mile measured course on a side road off from the Jericho turnpike at Williston.

Mr. Smith stopped the 12 horsepower machine in 95 feet 3 inches, twice, when travelling at 30 miles an hour, and in 31 feet 9 inches at 20 miles. Leon Laurier stopped the same machine in 106 feet at 1m. 45s. for the mile, and in 14 feet 6 inches at a 2m. 55s. speed. George Whiting brought the 8 horsepower machine to a stop in 91 feet at a 2m. 5s. rate per mile.

Previous to the run on Long Island the trio of Panhards was driven through Fifth avenue and Broadway and in many of the streets in the Wall street district. The drivers handled them with an ease that showed perfect control. While excellent progress was made through the crowded thoroughfares, there was not a collision or even a narrow escape from one, owing to the care and skill of the drivers and the effectiveness of the brakes.

"This test demonstrates that a properly



built machine, equipped with a first class brake, can navigate city streets much more casily, with more speed and less danger, than a vehicle dragged by a horse," said Alderman Oatman afterward. "The two heavy Panhard tonneaus and the big Royal Coach, carrying fifteen people, went down Broadway at the busiest part of the day. None of these vehicles occupied half the space of an average vehicle drawn by a horse. It demonstrated to me that if all vehicles were automobiles there would be twice as much room in the streets.

"The test proved that an automobile is able to start and stop instantly. When going at the rate of eight miles an hour all three of the big cars were stopped in less than a foot after the brake had been applied, and they were started again at a fairly high rate of speed. They darted in and out of a long procession of carriages, cars and wagons going downtown, and passed scores of vehicles going in the same direction.

"Another fine exhibition of the capabilities of the big automobiles was shown in front of the American office, where the three vehicles, having stopped for a moment, were immediately surrounded by a big crowd and were soon hemmed in by dozens of newspaper delivery wagons. The Panhards had hardly ten feet of space in which to turn arcund. It seemed impossible for them to extricate themselves, but they immediately backed down Nassau street in Indian file, a feat that would be impossible for horse vehicles. This seemed to demonstrate that street blockades would become practically a thing of the past when automobiles are in universal use and the horse has disappeared from the city streets."

What Wire Wheels Did.

To the Editor of the Motor World:

Did anybody notice that the Renault car, first at the winning post in the Paris-Vienna race, was equipped with wire wheels? Also the Darracqs, finishing fourth, sixth and seventh, in the same race?

Most of these cars were driven by their designers and manufacturers, who have had ample experience and opportunity for judging of the merits of wire and wood wheels, and who, beyond question, considered their own safety of paramount importance.

And these people formerly all used wood wheels! Still, in this instance they used wire!

Any significance in that?

Keep your eye on the wire wheel! Very truly yours, WESTON-MOTT CO.

Utica, N. Y.

Barred From Yellowstone Park.

An order just issued by Secretary of the Interior Hitchcock excludes motor vehicles from the Yellowstone Park. It appears that the authorities of the Park consider automobiles to be dangerous, and it is upon their recommendation that Secretary Hitchcock ruled to exclude them.

The Motor World.

Now Ready for Marketing.

One of the sensations of the Chicago show was the new gasolene touring car there exhibited by the International Motor Car Co. It was conceded to be excellently designed and soundly constructed, and the opinion was freely expressed that if the company was able to turn it out in quantities there would be no difficulty experienced in selling it.

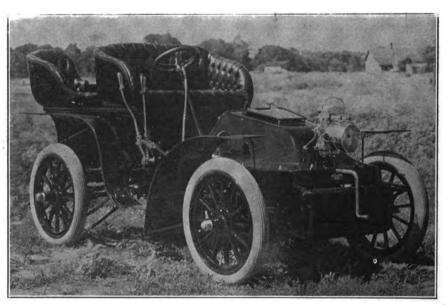
So busy was the International Co. kept with its standard patterns, however, that it is not until now that it has been able to get in shape to market the touring car. In the mean time it has been materially changed and improved. The illustration shows the form in which it will be seen, now that shipments have begun to the long line of waiting agents. The beauty of the car, how-

erroneous report, of course—he is quoted as replying:

"Oh, you are talking of his wonderful Bullet," replied M. Fournier. "Now, his last trial was unofficial, and when he begins again with recognized timekeepers, whatever the clocking may be, I am willing to wager that I shall be able to go one better on one of the machines which I am going to take over to the United States in September, when I shall have with me the very latest models of the Mercedes, Panhards, Mors and Renault makes, both for racing and pleasure purposes."

Oldsmobile in England.

The remarkable success of the Oldsmobile has attracted no small amount of attention in Great Britain, and out of this, doubtless,



INTERNATIONAL TOURING CAR.

ever, and its excellent behavior are expected to console them for the long delay.

As the Motor World stated at the time would be the case, the usual Panhard system of transmission has been substituted for the shaft and bevel gears employed on the first cars. Chains carry the power from the countershaft direct to the rear wheels, and insure satisfaction in this respect. The speed changing levers have also been materially modified, being placed on the right hand side in place of the left. A triple cylinder vertical motor is still used, the bonnet being somewhat changed.

The tonneau body is vastly more roomy and comfortable than at first, and no effort has been spared to secure the comfort of the passengers as well as the efficiency of the car.

Fournier Will Defend his Record.

Henry Fournier still keeps a watchful eye on his one mile record made on the Coney Island Boulevard last fall. Although now in Paris, he evidently expects to defend his title, for upon being told last week that Alexander Winter had beaten his record—an

has grown the Oldsmobile Co. of Great Britain, Ltd., which was registered in that country recently. It has a capital of \$15,000, and its object is stated to be "to adopt an agreement with F. W. Peckham and to carry on the business of manufacturers and repairers of and agents for the sale and purchase of automobiles, autocars, motor cars, carriages and cycles, mechanical and electrical engineers, machinists, fitters, founders, tube makers, platers, etc."

An English Locomobile Co.

An English company, under the title of the Locomobile Co. of Great Britain, Ltd., has been formed to take over the business of the American company. The capital of the company is £50,000 in 6 per cent preference shares guaranteed by the parent company for twenty years, and £130,000 in ordinary shares; £30,000 is available for working capital, while £20,000 goes to America for the share of patents, goodwill, etc.

The new company will confine itself to the sale of Locomobiles, the parent company looking after the manufacturing end.

North Shore has a Club.

Residents of the North Shore, on the Massachusetts coast just north of Boston, met last week and formed an automobile club. The following officers were elected: President, W. D. Denegre; vice-president, Dr. C. T. Parker; secretary and treasurer, Q. A. Shaw, jr., Pride's Crossing-these officers, with H. P. McKean and Gerard Bement, constituting the executive committee.

It was voted to affix to the vehicles belonging to the members of the club numbers to identify them, and that they may be distinguished from the automobiles of those whose reckless driving is tending to make unpopular the use of the machines. In this way the club hopes to discourage excessive speeding, and to encourage more careful handling of automobiles.

His Hoodoo Still Persued him.

Reginald . Vanderbilt is rapidly becoming famous, his specialty being to undertake record breaking automobile trips, but never to finish them. Last week he made his second attempt at a record run to Boston. but once more came to grief, his automobile breaking down near Dighton in such a way that temporary repairs were out of the question

Mr. Vanderbilt himself, looking careworn and crestfallen, returned to Newport on the train. His chauffeur came back later in the day in charge of the disabled machine.

Proposes to Cross two Continents.

An around the world tourist who has attracted but little attention is at present staying at Lake Hopatcong. He is C. L. F. Duhan, whose home is in Yokohama, and who has spent much of his time in the Orient, having passed through the recent Boxer trouble in China. He will go to Europe in September. With him will go his automobile, in which he proposes to ride from Paris to Vladivostok, crossing the two continents and arriving at his destination early next year.

Shipments to far off Places.

A good export business in automobile parts is reported by Charles E. Miller, 97 Reade street, New York. During the past few weeks he has made large shipments to Mexico. Cuba and South Africa. He is also importing largely, especially French goods. In a recent shipment of the latter were two horns, the largest ever brought to this country.

Parade of Heavy Trucks.

Twenty-three heavy trucks took part a few weeks ago in a parade held in London under the auspices of the Congress of the Tramways and Light Railways Association, on the Thames Embankment.

Last week Mr. A. L. Prescott, of the Prescott Automobile Mfg. Co., returned from a 2,000 mile trip through Connecticut and Massachusetts in a Prescott steamer.

Physicians Want Privileges.

Physicians and city authorities have locked horns at Buffalo, the burning question being whether an extension of the speed limit shall be made in the case of the former when responding to hurry calls. Last week, after three physicians had been arrested for speeding their automobiles on hurry calls, Dr. Lee H. Smith, president of the Automobile Club, proposed that physicians be allowed to exceed the legal speed when necessary.

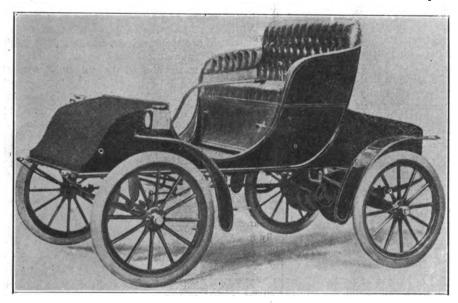
"It can't be done," said General Bull, the Superintendent of Police. "These physicians would say every call was a matter of life or death. The result would be that we would have a lot of doctors racing around town in automobiles and killing more people than they saved."

A New Waverley.

A companion vehicle to the Waverlev electric tonneau manufactured by the International Motor Car Co., and first exhibited at the Chicago show, is the Chelsea, reproduced helow. The favor with which the first mentioned car was received led to the designing and building of the Chelsea.

The tonneau body of the former is replaced by one seating two persons; in other respects the two vehicles are almost identical. The hooded front and other earmarks of the popular type of gasolene vehicle will be noted. The long wheel base makes a particularly comfortable car, and the motor is of unusual power, being capable of running the car up to twenty miles an hour.

One of the Chelsea models is expected at



THE CHELSEA RUNABOUT

A Two Day's Run.

The Automobile Club of New Jersey, which has been holding successful weekly runs of from fifty to sixty miles, has made a departure in that the run for this week will include a two days' trip, the itinerary being: Leave Newark on Saturday at 3 o'clock, dining at the Denville Hotel, thence to Hopatcong by moonlight, spend the forenoon at the lake, returning to Denville for dinner and arrive in Newark late in the afternoon.

Will Build a Garage.

Hitherto the very considerable number of automobile storage warehouses, or "garages," in this city have been content to make use of buildings already standing, remodelling them where necessary for their own purposes. Last week, however, Thomas D. Belfield bought the vacant plot 50x100, on the east side of Sixty-seventh street, 150 feet east of Amsterdam avenue. He will improve the property with a fireproof warehouse, to be used for the storage of automobiles.

A second edition of "Motor Vehicles and Motors," the elaborate and exhaustive work of W. Worby Beaumont, has been called for in England.

the New York branch of the International Co. within a few days.

Recent Incorporations.

Newark, N. J.-Moto-Tractor Co. of America, with \$100,000 capital, to manufacture automobiles, etc. Incorporators, Herbert Cottrell, L. S. Hinckley and B. W. Strauss.

Jersey City, N. J.-Berg Automobile Co., with \$400,000 capital, to manufacture automobiles, etc. Incorporators, John Wylie, Aug. Treadwell and James E. Hays.

Brooklyn, N. Y.—The Pomeroy Motor Vehicle Co., with \$120,000 capital. Directors, Bernard H. Pomeroy, James L. Lazelle and

Charles D. Winfield, of Brooklyn.

Denver, Col.—Merchants' Mobile Delivery
Co., with \$50,000 capital. Incorporators, J.
B. Walker, J. R. Walker and A. C. Phelps.

Denver, Col.—Colorado Mobile Co., with

\$60,000 capital.

A Thousand Mile Trip.

A tour extending a distance of over one thousand miles was brought to a successful conclusion last week at Marshall, Mich. Mr. and Mrs. J. M. Redfield were the tourists, starting from Clinton, N. Y., on a Saturday and reaching their destination ten days later. The trip was made without incident and most of it in pleasant weather. An 8-horse power Winton was the vehicle used.



HIS NATURAL ENEMY

How the Horse is Schooled to Forget his Animosity to the Automobile.

"Horse sense" is a term that has a very definite as well as pointed meaning, and it is the best praise of the latest pronouncement of the Automobile Club of America to say that it is fairly brimming over with norse sense.

It is an open secret that President Shattuck. and other prominent members of the club are very much interested in the subject of horse education. Quite half of the opposition to the motor vehicle has its origin in the resentment of horse owners, drivers and lovers. The horse does not take kindly to its notural enemy, and, on the other hand, too many automobilists do not show the proper consideration, not to say respect, for the equine that only a few years ago had the field to Itself. They are too ready to meet attack with attack, instead of reflecting that the horse is on the ground and cannot be eliminated as a factor in the situation in a day, and should, therefore, be humored to some extent.

To bring about a better feeling between the two classes, to educate horses and accustom them to the sight, sound and even smell of automobiles—this is the object sought by the premier organization.

"A few owners of automobiles are inconsiderate and drive their vehicles recklessly on the public roads," it says in a circular sent out last week. "A small number of owners and operators of automobiles are unskillful, and they do not appreciate the care and skill necessary in driving a self propelled vehicle until they have met with or caused an accident. These two classes of people have done much to injure the sport and the industry of automobiling. We are glad to see that but few members of this club have been guilty of recklessness, of want of consideration for the rights of others on the highways, or of want of skill.

"We ask all the members of the club to use their influence to prevent the inconsiderate driving of automobiles, and of their use by persons who do not properly understand how to handle them.

"Accidents are in our opinion caused:

"1. By want of skillfulness in the operator and by defects in construction.

"2. By frightened horses.

"The first class of accidents can be prevented by not driving an automobile until you are competent, and by insisting that manufacturers shall use more care in design and construction.

"The second class of accidents can be prevented by care in driving an automobile. On meeting a horse, if he throws up his head suddenly and puts his ears forward he is frightened and he will probably shy. If the driver of an automobile would stop his vehicle, and if the horse continues to be frightened will stop his motor, if he is driving a

carriage propelled by a gas engine, the horse can be driven past it. The driver of an automobile, if there is difficulty in getting a horse to go by, should himself or have his mechanic lead the horse past the automobile. In doing this the man leading the horse should stand between the automobile and the horse. When a horse is shying away from an object it is much easier to hold him if he is shving away from you than when he is shying toward you. Then, too, a man has more strength pulling than pushing. The occupant of the automobile should always call out to the horse when he is passing a vehicle, saying, 'whoa,' etc., in a loud voice. This frequently will reassure a horse and prevent his shying.

"It is far better to take a little trouble than to cause an accident, which outside of damage to property may produce pain, suffering, and even loss of life. Horses that are used in or about large cities, and in towns where there are trolley roads, are but little frightened by automobiles. When, however, a horse unaccustomed to automobiles meets one in a quiet country road he is frequently frightened, he shies, sending the wagon into the ditch, or he turns around short and upsets the wagon. To accust on horses to automobiles in the country, some of the members of the club have with considerable success undertaken the training of horses in the communities where they reside. We desire to call this matter to your attention, and to ask every member of the club who can, either himself or his mechanic (if he employs one), to devote an hour every morning to the training of horses in his vicinity during the next few weeks, and to report on September 1 to the secretary the number of horses he has succeeded in training and the effect his work has had on the community where be resides.

The following method of training horses has been proven very successful by several members of the club: Select a place, preferably a small square, in your town, where the road is wide, or a mile of wide road where there are no ditches, if possible. Have the horse or horses to be trained driven five or six miles sharply before the lesson begins. A well fed animal just taken from the stable is apt to feel so good that he will cut up on the least provocation.

The horse to be trained, if possible should be harnessed alongside of a horse that is accustomed to automobiles. If this cannot be done he should be driven. It has not been found satisfactory to lead or ride a horse in breaking him in to an automobile. Under these circumstances he is too free and too little subject to control.

Send the automobile around this square or along the road at about six miles an hour. Have the horse which is to be trained follow the automobile at a distance of about ten feet. He will do this without protest. Let him follow the automobile for about fifteen minutes. Then have the horse pass the automobile, leaving it on the off side, or right hand. The horse will probably shy a little away from the vehicle. Do not attempt, if the road will permit, to hold him up to the

automobile or to whip him on the near side, but let him shy. As soon as he has passed the automobile he will probably break into a run. Do not check him too suddenly, but speak to him, and he will soon come down to a slow trot. Then have the automobile speed up and pass the horse, leaving him on the off side, or right hand.

Repeat these operations five or six times for another fifteen minutes. The horse will have become so accustomed to the automobile that he will no longer shy and no longer try to run in passing it. A horse is really a very nervous animal, and his lessons should not be too long; thirty minutes is enough for the first day.

The first morning's proceedings should be repeated for, say, ten minutes. Then the automobile should be stopped at the side of the road and the horse should be turned around so as to face it. The engine of the automobile, if it is a gas engine, should be slowly rotated. The horse will shy a little. He should repeatedly pass the automobile while stopped in this manner for, say, ten minutes. Then the automobile should be set in motion slowly and he should pass it for ten minutes more, after which he should be sent to the stable. It will be found that he has gained considerable confidence, and that he will shy but little. The occupant of the automobile should call out to the horse when he is passing, in a loud voice, "Whoa, boy!"

The third morning he should be taken out and made to repeat or review all that he has learned on the first and second mornings, which should occupy fifteen minutes. It will be found that he will probably not shy at all, and the automobile may be speeded up and he may be passed when facing it at a considerable speed. The horn should be blown gently at first and later on vigorously. The occupant of the automobile should call out to the horse when passing, in a loud voice, "Whoa, boy!"

It will be found, if these instructions are carefully carried out, that there are but few horses that cannot be made to pass an automobile at a high rate of speed with safety in three lessons of thirty minutes' duration each.

The point we particularly desire to impress upon you is to always let a horse shy in passing an automobile, if the road will permit. There are occasions where the road is so narrow and the ditch so abrupt that not only a horse must be kept up to the automobile, but he must be struck smartly with the whip to keep him from turning around and to prevent his capsizing the vehicle in the ditch.

It is quite useless to whip and spur a horse up to an automobile and to try to force him, by giving him pain, not to be afraid of it. It is also a bad practice, in driving a horse past an automobile, to stop the horse and have the automobile proceed past him. He is frightened and very apt to turn around. The proper way is to stop the automobile and let the horse be driven past it.

We desire to impress on you, and on all owners of automobiles, that if the drivers of automobiles would go slowly in passing horses, and, if they saw that the horses were frightened, would stop, there would be no accidents caused by horses.



Next to the Meat Trust, the worst public enemy at present is the automobile. Accident follows accident as these motor cars increase in weight and speed. Frightened horses run away, pedestrians are knocked down and mangled, and the Juggernauts never stop or say so much as "Beg your pardon," but continue unmoved on their death dealing way. One of the freak racers, a machine built in the form of a pointed cylinder, speeding against time at a rate of over a mile a minute on a Staten Island boulevard, suddenly bolted into a row of spectators, killing one of them and seriously injuring ten others.—(Albany (N. Y.) Country Gentleman.

There has been recently throughout the country an epidemic of "autophobia." Autophobia has been defined as being a spasm of abject terror which some persons experience upon seeing an automobile approaching or hearing its warning sounded, no matter how distant the auto or how great their coign of safety. Some of the results of this epidemic have been the framing of restricted speed laws by the wise Solons of innumerable unpopulated bailiwicks who rarely if ever see an automobile, and whose conceptions of the same are drawn largely from the yellow journals who delight in publishing each week a list of automobile accidents. The fact is that very few accidents are caused by automobiles in proportion to the number in use. If a horse runs away, causing an accident, the fact is chronicled in the home paper; if an automobile is responsible, the story is wafted over the country even unto the columns of the Arizona Cactus.-(Newark (N. J.) Call.

As the residents of adjacent townships boasting good roads have learned to their cost, the swift flying automobile is something more than a mere mechanical device by which a fantastic passion for swift motion may be gratified. It is a terror to thoroughbred horses, a menace to life and limb and a bar to pleasure driving, especially when the reins are handled by women, In a great city it is possible and necessary to curb the zeal of the "chauffeur" with the strong hand of the law; beyond the scope of municipal restriction he may go lickety-split. with none to molest or make him afraid. A few able bodied enthusiasts devoted to the gasolene engine cult may easily terrorize

the entire circumjacent region, without the slightest notion that they are an offence to the community. Should the "yellow ghosts" and "red devils" continue to increase and multiply in the good roads section, the only recourse for old fashioned lovers of the horse will be to sell out their stables and become chauffeurs like their more ambitious and progressive neighbors.—(Philadelphia Record.

Chicago is getting even more strenuous in its determination to regulate the automobile. Its already stringent regulations have been made more so by the Council determining that hereafter two independent sets of brakes must be in working order on each motor.

This looks like carrying the matter altogether too far. One good set of brakes is an absolute necessity, and the Council could not too strongly demand them. But two sets of brakes is a different thing. In the first place, the chance of brakes going wrong is comparatively small. If they are properly watched there is practically no opportunity for an accident to them. If an automobile has two sets of brakes it will not mend matters. The idea of the Council is, of course, to protect life and prevent accidents. The occasions which arise for the use of a brake. however, are such that there is almost no time to fool with things. When the necessity for the use of the brake arises it must be used at once. A second's detay is fatal. and if the first brake will not work there is no time to try the second set—(Detroit (Mich.) Free Press.

With the exception of the speed restrictions applying to all vehicles, there is no legislation in this State to control the reckless chauffeur. Unquestionably there is need for legislation, although Baltimore has been practically and almost miraculously immune from the automobile tragedies with which other cities have been cursed. There is no sense in awaiting the arousing influence of a series of deplorable and inevitable accidents,

Besides the usual speed restrictions now in force here, in many other cities all chauffeurs have to qualify and take out an engineer's license. This, at any rate, is a certain guarantee that the automobilist understands and has the knowledge and practice requisite to properly control his machine, which knowledge the superficial teaching of automobile agents does not give and never guarantees.

Under present conditions it seems hardly possible for a certain element of danger to be entirely eliminated from automobiling, and for this reason there is urgent need for legislation of the most specific character. Why not make it compulsory for horseless carriages to be equipped with a fender similar to the ones used in front of street cars? This fender is more needed on automobiles than on street cars, as motor vehicles can keep to no beaten track, and the danger of

running down pedestrians is, of course, greater.

Automobilists could hardly be expected to raise objection to this innovation, as it would enable them to enjoy their sport in a more care-free frame of mind and with less danger of damage suits and police trials.—(Baltimore Herald.

There can be no doubt that automobiling, in its illegal and defiant forms, has "got upon the nerves" of the public. There was a time when bicycling was similarly regarded. Wheelmen-some of them-habitually and defiantly violated the law, to the terror, peril and actual injury of the lawabiding part of the community. It was no wonder that people came to regard the "scorching" wheelman as a public enemy, to be set upon with violence whenever and wherever found. That state of mind has passed away, with the passing or reformation of its provoking cause. But now certain automobile drivers are arousing it again, directed toward themselves. They arouse it by their persistent and defiant violation of the law and by their contemptuous attitude toward the law and toward their victims, When admonished by a policeman that they are going too fast they put on still more speed to escape being arrested by him; and then, after a mile a minute race, when they are finally brought to book, they declare they were not conscious of going faster than the law permits. When pedestrians or other vehicles are in the road they do not try to avoid them, nor do they give them their dué share of the road, but instead keep right along in the middle of the road, merely clanging a gong or blowing a horn as an arrogant order for everybody else to "get off the earth" or take the consequence. When they do run into or over anybody, instead of decently stopping to see what harm has been done and to render assistance, if possible, they put on full speed and hasten away to avoid recognition. If ever they are brought into court and fined for lawbreaking, they pay the fine, either as a joke or with an intimation that they regard it as blackmail, charge it to the inevitable profit and loss of the sport, and go their way to repeat their illegal performances.

As we have said many times before, there are only a few automobilists who do such things, in proportion to the whole number; yet there are enough of them to create an intolerable nuisance in city and country, and so to exasperate the public mind as to lead to such outbreaks as those which we have been deploring. People have come to look upon the scorching automobilist as a public enemy, and whenever he commits any mischief they are ready to take the law into their own hands and inflict summary punishment upon him. It is not right for them to do so. It is disgraceful for them to do so when a woman is involved in the case. But the best way to stop them from doing it is to suppress the cause, for that cause is itself as unlawful as its deplorable effect.—(New-York Tribune.

It Ran Amuck.

To chronicle the doings—real or alleged—of the motor vehicle is a task which the pen artist of the "yellow" journal delights to undertake. The more he draws the long bow, the thicker he applies the colors, the better pleased he and his superiors are.

Automobiles that "run amuck" are the special joy of such writers. There is something thrilling in this Malay term, and the unction with which it is uttered is comething long to remember:

"Before the rush of a steam automobile the youthful population of Rivington street last night was scattered like tenpins," says the Journal on this line. "Six boys were taken in charge by local physicians and treated for scalp wounds, bruises and cuts. The pushcarts which lined the thoroughfare were demoralized, and when the machine was finally stopped there was left in its wake a jumble of merchandise which the owners were at an early hour this morning still trying to assort.

"Dr. Bernhard Frankel, of No. 74 Rivington street, owns the machine. He returned at half past nine o'clock last night from visiting his patients, leaving the machine at the curb in charge of his chauffeur, Joseph Wartenburg. The chauffeur was examining the machinery of the conveyance when a small boy passed up the street and struck the lever with a stick. The vehicle bounded into the air and then started across the street. It carromed at the opposite curb, and a push-cart laden with stockings and suspenders served as a cushion. The sidewalk near-chants leaped to the nearest stoop, saying things about 'devil wagons.'

"On its way down toward the river the machine left a track of devastation behind it. Men with long whiskers displayed new found agility. Women gathered up their skirts and ran to the shelter of the houses, and children hurried screaming at the tops of their voices to seek places of asylum. The machine had its own way with the merchandise of the wayside booths. It no sooner struck one cart then it bounded for the opposite side. Vegetables were blended with dry goods, to the damage of both kinds of mercianlise. When it had got well started on its course the machine resembled, to borrow a comparison from Mark Twain, a tortoise shell cat struggling in a dish of tomatoes.

"In its flight all the products of the field and the fruits of the loom seemed to have come in contact with the whirring wheels of that evil machine. The thing jumped up and down, as if in wanton glee. Whenever there was a specially good assortment of dry goods on view it converted itself into a gigantic billiard ball and never missed the mark.

From Cleveland to Utica.

An enjoyable and interesting trip of 550 miles was made by A. V. Brower and A. J. Scaton, of Utica, N. Y., recently. They completed a tour, in a Winton touring car, from Cleveland, Ohio, to Utica, leaving Cleveland on Tuesday at noon and arriving at Utica just three days later. The actual running

time was thirty-six hours. The trip was undertaken both for pleasure and business. Much valuable information was gathered in regard to roads and routes. They report the roads in Ohio and Northern Pennsylvania very good, and in New York State very bad. Incessant rains have been the cause of removing many bridges and making deep holes that are very dangerous to both machine and passenger.

The route taken covered about 550 miles, and not one stop was made for repairs of any kind. Two gallons of lubricating oil and twenty-seven gallons of gasolene were used.

How Much it Costs.

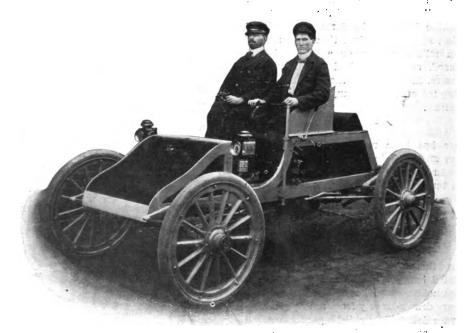
An Indiana engineer has estimated the cost of transporting goods over the highways. He figures that the cost of moving one ton by horse power over one mile of dry, sandy

Has Power and Speed.

Among the high powered and speedy racling cars which were expected to make sensational performances in the Staten Island trials on May 31, but which were left unfinished owing to the lamentable accident that occurred on that day, the Howard steam car attracted unusual attention.

But little was known concerning it, although that little was very much to the point. Its speed was said to be extraordinary. Repeated trials had demonstrated this fact, and the day referred to was expected to witness the fulfilment of the promise held out. But, as the event showed, this was not to be.

Since then the car has been thoroughly tested and tried, and such minor changes made in it as a more extended experience has shown to be desirable. The car, which



THE HOWARD STEAM CAR.

he.

road is 62 cents; over wet sand, 32 cents; over ruts and mud, 39 cents; over broken stone and ruts, 26 cents; over an earth road that is dry and hard, 18 cents; over a broken stone road in good condition, 8 cents; over a compact gravel road, 8.8 cents; over stone paving, 5.33 cents; over asphalt, 2.7 cents. It is argued that many millions of dollars would be saved and many tons of merchandise would be available in the markets if the roads were such that transportation by wagon would cost not more than five cents a mile.

The Week's Exports.

Antwerp-17 cases auto mchs., \$86.

Argentine Republic-1 case motor vehicles and material, \$42.

London—17 cases motor vehicles and parts, \$10,937.

Mexico—18 cases auto vehicles and parts, \$4.067.

Southampton-1 case auto vehicles, \$850.

is made by the Howard Motor Co., Trenton, N. J., is very far from being a freak, as a glance at the illustration will make plain. Its makers write that they have been testing It for the past six weeks, and making such minor changes as their experiments suggested, and they now believe that it is in perfect condition to go after and get the record.

"We have done 50 seconds on numerous occasions with three in the wagon," they say, "and this on a road which at its best is none too good."

The car has an 8 foot wheel base and a 4 for t 8 inch tread. The wheels are wood, of the artillery type, fitted with 36x3 inch Munger tires. The engine is rated at 10 horse power, although really developing considerably more. A fire tube boiler, 34 inches in diamter, containing 1,060 half-inch flues, is used, and the burner is made in three sections. The car has a capacity of 15 gallons of gasolene and 50 gallons of water. Its weight is about 1,000 pounds.

The car is equipped with Munger tires, which are found to be eminently suitable for high speed work, and to them is attributed to a great extent the speed which is attained,

Racing Vehicle Construction.

In the ordinary types of automobiles the motor is placed on a secondary or "false" frame, so as to allow of its being placed low down for the sake of reducing the centre of gravity, but in the C. G. V. racing vehicle the secondary frame has been suppressed to save weight, and the engine is bolted direct on the main frame. The frame itself is constructed of wood forced into weldless steel tubing, and it curves to a point at the back where it is supported by a bracket on a transversal spring, the ends of which are carried on the ordinary springs on the rear axle. Special attention has been given to the axles, for here, as in every other part of the vehicle, there has been a considerable cutting down of weight. They are made of gun metal, the rear axle being hollow and capable of resisting enormous strains, while the front axle is straight and is grooved out its whole length on four sides. Aluminum is of course used in every part which does not have to resist strains, and notably in the crank case, the gear box, the cylindrical water tank, on the top of which is fixed an aluminum seat. The appearance of the vehicle is novel, as the huge motor is placed right behind the front axle, and the driver's seat is thus set nearly between the rear driving wheels. The length of the wheel base is 8.2 feet.

Without any Mishap.

That one of the family at least can take an automobile run without accident or delay, a matter which was open to considerable doubt, was demonstrated last week when Alfred G. Vanderbilt rode from Newbort to Boston and return in the same day.

He left his suburban place in Portsmouth about eleven o'clock, and reached Boston about three. The regular route through Fall River, Dighton, Taunton and Mansfield was taken, the roads being found in excellent condition after a good rain of the night before, that had laid the dust and hardened the surfaces. An hour was spent in Boston, during which the machine was examined and lunch was taken, and the party left on the return trip at four o'clock, arriving back in Portsmouth again three hours later.

The automobilists on the return had the benefit of their knowledge of the roads obtained on their run out, and consequently they made much better time. The distance covered each way was about eighty-seven miles.

Kipling up to Date.

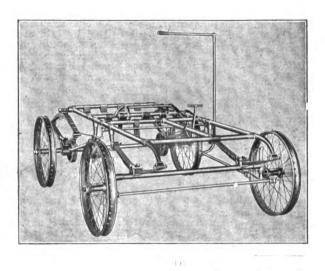
"Goggled her es" was what some of the foreign papers dubbed the contestants in the Paris-Vienna race. There is no doubt that such a race calls for the utmost courage and heroism. In some places the roads were snow-piled, there were sharp, dangerous curves and precipices; over the Arlberg Pass the drivers carried their lives in their hands. For upward of 100 miles the mountain road was c vered with loose, big, round stones, broken flints, and six-inch-deep ruts.

HERCULES RUNNING GEARS

FOR ELECTRIC AND GASOLINE VEHICLES

There are no weak spots in these gears.

Don't confound them with gears which have been hastily constructed to meet an early demand from automobile makers.



We also solicit orders for parts of these gears.

Their design is original and the construction is sound. Prices and particulars of construction sent upon application.

SMITH STAMPINGS FACTORY

Milwaukee & Wisconsin

Passage of the Passe-Partout.

At last accounts the Passe-Partout, the around-the-world motor car, was approaching Berlin, it having met with a number of small mishaps after leaving Paris.

It was not until June 15 that the departure from the latter place was taken, and the weather and the roads were both bad. The route lay through Chalons, St. Menehould, Verdun, La Croix sur Meuse, Pont Musson, to Champé on the French frontier.

On leaving Lorry, the frontier town, an incident occurred, which narrowly escaped ending in the wreck of the Passe-Partout. A sleek, well-fed cat—apparently a public pet—got under the wheels, and was killed, where-upon the crowd, mostly women, became infuriated, and showered sticks, stones and other missiles upon the luckless Passe-Partout. It was only by forming a ring around the car and forcing the crowd aside that the vehicle could be got away, happily unharmed.

The next town was Metz, where the plugs and commutator were cleaned and the ignition adjusted. The roads here were excerable. On Wednesday, June 18, the fourth day from Paris, they passed through Saarburg. Trier, and the Moselle Valley, where the scenery was magnificent. Near Sehl the car, by some unaccountable means, charged an iron fence, which had to be pulled down before the vehicle could be extricated. The ferry at Trels was crossed, and Coblentz was reached the same evening.

Beautiful running was made to Cologne, where a good time was spent, and early next morning they started for Dusseldorf, and on arrival there the cyclometer registered 1,197 kiloms. 777 kiloms, of which had been done since Paris. After a short stay at Dusseldorf, the cars set out for Berlin, and on June 22 were at Bielefeld.

Government Still Experimenting.

In spite of the unfortunate ending of the Minneapolis (Minn.) experiment, the United States Government is seriously considering the proposition of mustering automobiles into the mail service. Tests are now being made of a number of vehicles with a view to selecting some particular make for the mail service. The machines will be used for both the collecting and delivering of mail.

W. S. McGinnis, an attaché of the office of the Assistant Postmaster-General, is now in Buffalo. N. Y., and last week, accompanied by Superintendent of Mails Eicher, of the Buffalo office, took a run to Niagara Falls on an automobile to test its availability for the service.

Still Adding to it's Roll of Notables.

Among the recent additions to the membership list of the Automobile Club of America were the following named gentlemen: Oliver Harriman, jr., William R. Leeds, James Stillman, Colonel Frank H. Ray, John B. Ray, William Guggenheim, Benjamin Guggenheim and Milo M. Belding, jr.

The Week's Patents.

704.304. Reversible Galvanic Battery. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Company, a corporation of New Jersey. Filed March 1, 1901. Serial No. 49,452. (No model.)

Claim.—1. An active element for an alkaline reversible galvanic battery, comprising a conducting support and a mixture of oxid of cobalt and an inert flakelike conducting material carried thereby, substantially as set forth.

2. An active element for an alkaline reversible galvanic battery, comprising a conducting support and a mixture of an oxid of cobalt containing more oxygen than the black oxid (CoO 23) and a flakelike inert conducting material carried thereby, substantially as set forth.

704,306. Reversible Galvanic Battery. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Company, a corporation of New Jersey. Filed June 20, 1901. Serial No. 65,288. (No model.)

Claim.—1. In a reversible galvanic battery, the combination of an electrolyte which remains unchanged during all conditions of use, a conducting support, finely divided copper carried by said support, a second conducting support, and an electrolytically active oxid of a magnetic metal other than iron carried by the second support, substantially as set forth

38,572. Rubber Tires. The Goodyear Tire and Rubber Company, Akron, Ohio. Filed May 26, 1902.

The words "The Broadway." Used since September 24, 1901.

704,555. Lubricating Device. Bradford H. Locke, Denver, Col. Filed Nov. 20, 1900. Serial No. 37,003. (No model.)

Claim.—1. In a motor, the combination of an outer sleeve or casing slotted or perforated circumferentially, an absorbent mass covering the circumferential series of slots or perforations, and a ring secured to the motor slaft and adapted to throw outward against said absorbent mass any oil which may reach the same, substantially as shown and described.

704,589. Sparking Coli Casing. Chas. F. Splitdorf, New York, N. Y. Filed April 30, 1902. Serial No. 105,307. (No model.)

Claim.—1. A sparking coil casing comprising a shell composed of tough non-conducting material, and an inner lining therefor composed of material possessing the quality of non-conductivity to a higher degree.

2. In a sparking coll casing, a cylinder composed of tough non-conducting material, an inner lining therefor composed of a thin sheet of material rolled upon itself in several plies, and possessing the quality of non-conductivity to a higher degree, a cylinder cap, an insulating disk at its inner surface, and a body of plastic insulation interposed between said disk and the coll winding.

3. In a sparking coil casing having the usual terminal openings, an insulating bushing within each of said openings, each of said bushings having an inward retaining flange and an outwardly projecting flexible extension.

704,616. Safety Device for Motor Vehicles. Herman Charles, Kofa, Ariz. Filed Feb. 7, 1901. Serial No. 46,468. (No model.)

Claim.—1. The combination with a seat of a motor vehicle; of a safety attachment comprising a platform yieldingly supported upon said seat; a rod depending from the under side of said platform and extending through an opening in the seat; means carried by said rod for controlling the supply of motor power to the vehicle; and means for locking said rod against movement.

704,618. Starting Device for Explosive Engines. Caleb F. Cope, Philadelphia, Pa. Filed Dec. 17, 1900. Serial No. 40,196. (No model.)

Claim.—1. In combination with a rotatable shaft of an explosive engine, a ratchet wheel, a device rotatable with respect to said wheel and adapted to be moved by the operator, a pawl mounted on said device and adapted to engage with said wheel, and two fixed trips arranged to be encountered by the pawl and located at different points in its path of movement, substantially as set forth.

704,676. Metallic Chest for Motor Vehicles. Ferdinand Charron and Leonce Girardot, Paris, France. Filed April 22, 1902. Serial No. 104,092. (No model.)

Claim.—A metallic wagon chest for petroleum motor road vehicles formed of a sheet metal plate cut out according to the contour, the projecting portions of which are raised vertically and secured together by their adjacent edges, in combination with a second sheet metal plate, which is horizontally secured to the walls of the chest thus formed so as to form a closed capacity of which three vertical walls extend above the top bottom, substantially as and for the purpose set forth

704,699. Transmission Gear. David Ferguson, Buffalo, N. Y., assignor to the George N. Pierce Company, Buffalo, N. Y. Filed April 17, 1902. Serial No. 103,291. (No model.)

Claim.—1. The combination of a transmission device adapted to be rotated at a constant speed in one direction, a driven element, gearing between said transmission device and driven element and operated by the former for rotating said driven element in one direction at different speeds, a counter shaft movable toward and from said transmission device and driven by the latter, and gearing between said counter shaft and said driven element for rotating the latter in the opposite direction, substantially as set forth.

704,713. Explosive Engine. Mathias J. Klein, Baltimore, Md. Filed Jan. 17, 1901. Serial No. 43,659. (No model.)

Claim.—1. In an explosive engine of the four cycle type, the combination, of a single acting cylinder, having on the compression side of the same an insulated cylinder extension, and on the other side of the cylinder a water jacket, the highest point of the latter having communication with the atmosphere as described, said water jacket being surrounded by air ribs for cooling the water in the jacket of a piston, having a hollow piston extension slightly smaller in diameter than the piston, in length equal to the piston stroke or longer, and extending into the cylinder extension, the hollow space of the piston extension being closed to the atmosphere, for the purpose and substantially as shown and described.

704,739. Secondary Battery. Justus B. Entz, Philadelphia, Pa., assignor to the Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Oct. 3, 1900. Serial No. 31,903. (No model.)

Claim.—1. A malleated antimonious lead grid for a storage battery plate, substantially as described.

2. A malleated antimonious lead grid punctured to form tangs or keys for holding the active material or material to become active of a storage battery plate, substantially as described.

3. A malleated antimonious lead grid bent

to form keys for holding the active material or material to become active of a storage battery plate, substantially as described.

704,750. Tank for Storage Batteries. Hugh Lesley, Philadelphia, Pa., assignor to the Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Feb. 8, 1902. Serial No. 93,118. (No model.)

Claim.—1. A lead lined storage battery tank having openings in its bottom which do not penetrate the lead lining, substantially as described.

2. A lead lined storage battery tank having channels between it and its lining and having an apertured bottom, substantially as described.

704,751. Manufacture of Secondary Battery Plates of the Planté Type. Harold M. Martin, Philadelphia, Pa., assignor to the Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed July 30, 1901. Serial No. 70,250. (No model.)

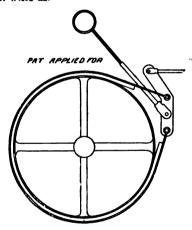
Claim.—1. In the rapid factory formation process of making peroxid of lead on battery plates, which consists in subjecting the plates to an electrolyte capable of producing

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the rapid formation of peroxid from metallic lead, that improvement which consists in controlling the temperature of the electrolyte during the formation, substantially as described.

704,860. Automobile. Samuel S. Conant, Edgerton, Ohio. Filed April 26, 1902. Serial No. 104,789. (No model.)

Claim.—1. The combination, with a vehicle body and base frame, of vertical guide shafts, axle hubs having gears connected therewith and both adapted to slide and rotate on said guides, spiral springs interposed between the hubs and the body of the vehicle and encircling the aforesaid guides, transverse shafts carrying worms that engage the said gears, a third shaft suitably geared with the said transverse shafts, and a hand shaft geared with such third shaft and adapted to be operated from the seat of the vehicle for swinging the hubs and axles norizontally and thus guiding the vehicle, substantially as shown and described.

704,809. Automobile. Alvaro S. Krotz, Springfield, Ohio. Filed July 8, 1901. Serial No. 67,391. (No model.)

Claim.—1. The combination with the front and rear axles, side bars flexibly connected to said front axle, and a motor, of corner pieces through which the rear axle extends, one of which carries said motor in connection with one of said side bars and the other rigidly attached to the other side bar, and a tube rigidly attached to said motor carrying corner piece and extending to and pivotally connected with the other corner piece, substantially as and for the purpose specified.

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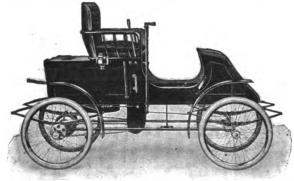
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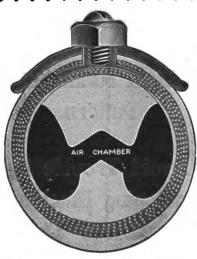
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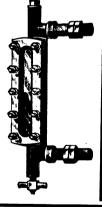
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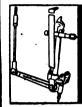


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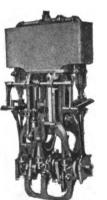
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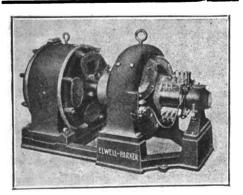
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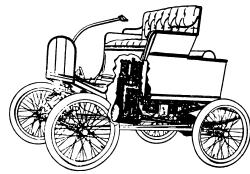
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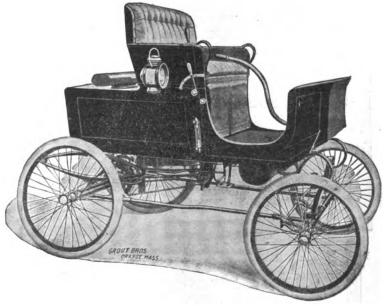
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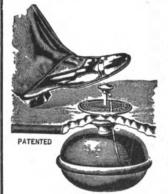
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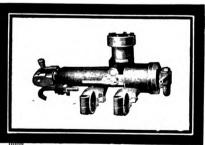
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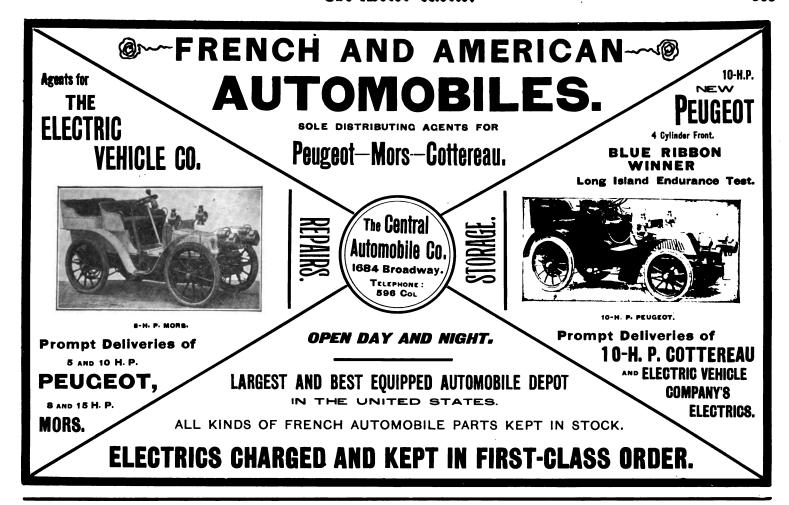
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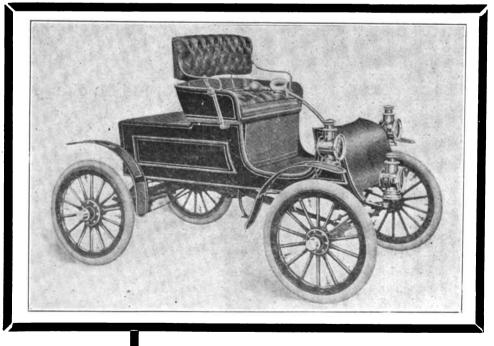
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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, July 31, 1902.

No. 18

BOSTON AND BACK

Is Selected for Reliability Test and October 6th is Date—Some Details.

The week of October 6 has been selected for the running of the "Reliability Test" of the Automobile Club of America, and, as was expected, Boston is made the objective point. These matters were definitely settled at a meeting of the committee having the matter in charge, held last week.

Six days will be devoted to the run, beginning with Monday. The contestants will proceed to Boston by easy stages, by way of New Haven, Hartford, Springfield and Worcester, returning by that or another route, and occupying three days going and three days returning. An observer, lodged and fed at the expense of the club, will accompany each car, and rules regarding the maximum and minimum speed, especially the former, will be rigidly enforced. These, the main features of the run, have been decided upon by the committee, Messrs. Scarritt, Chamberlin and Hill.

The work of arranging the details of the run will be actively prosecuted. There are many points regarding which differences of opinion exist, and some of them were touched on by Chairman Scarritt in a talk the Motor World man had with him on Monday.

"No one who has not been through it can appreciate the amount of detail work there is connected with a run of this character," he said. "We expect 125 entries, and this raises a very important question with regard to the route.

"It has been suggested that we return by way of Providence. The roads are not so good that way, but this of itself would be no great objection, for we do not want to pick out only 'sand papered' roads. It is the arrangement of the details that causes us to pause. Two routes mean two sets of controls, two sets of hotels to arrange meals with, and so on. Is it worth all this extra trouble?

"The expense we shall be put to on account

of the observers is considerable. Last year we had no observers. In October we must feed and lodge them for six days—125 of them probably—and this means a very considerable outlay.

"Again, how shall we draw the line at repairs? Yes, I will admit that we should make rules as strict in this respect as they can reasonably be made, but will you tell me just how strict this should be? Suppose we locked the vehicles up upon their arrival at night, and permitted access to them in the morning an hour or an hour and a half before the start was made, would that be a reasonable time to give?

"Then, as to the speed. Of course, we shall prevent all racing such as was indulged in last year on the Buffalo run. No speed in excess of that legal will be permitted. But as to the minimum, shall we raise the limit? It was twelve miles last year for those eligible to first-class certificates. Should it be made thirteen this year?

"We want to have the run as nearly perfect as it is possible to make it; but we are busy men, and cannot devote all our time to it. Therefore, we invite suggestions, and I can assure you that they will receive full consideration."

Now The Federal Mfg. Co.

To-morrow, August 1, The Automobile & Cycle Parts Co. will have ceased to exist. In its place comes The Federal Manufacturing Co., under which name the entire business will hereafter be transacted. This change of title will not in any manner affect the management of the company or the business of its factories. The products of the company's factories are so diverse that a comprehensive firm name became a necessity for the Cleveland concern.

An automobile race meet to be run on September 22 in connection with the Taunton, Mass., fair is announced. Particulars may be obtained from Dr. Crandall, 67 Spring Street, that city.

Deauville is to have a repetition of last year's automobile racing on August 6, when speed trials will be carried through over the mile and kilometre course on the sea front.

WAS A BOOMERANG

Petty Persecution on Jersey Coast Reacts Upon its Instigators—Mistake Admitted.

It begins to look as if the autophobes of Long Branch and other New Jersey coast resorts had overreached themselves.

Their crusade against automobilism—for it is nothing else—has proved to be a boomerang. It has stirred up automobilists to a realization of the fact that their only safety lay in combination and resistance; while, on the other hand, even fair minded anti-automobilists have become disgusted with the petty persecutions instituted in their name. Through the latter feeling has come a decided reaction.

The matter is likely to come to a head next week, when the pending ordinance restricting the speed of automobiles to six miles an hour—a mile in ten minutes—comes up before the Long Branch Council. A week or two ago it looked as if this ordinance might go through without trouble. But now it is thought that even the councilmen will hesitate to pass an ordinance that will make it I lain that nothing less than the disappearance of the motor vehicle is desired.

The misuse of the money raised in Seabright to pay for patrolling the Rumson Road and Ocean Avenue is also a factor in the case. The opinion is pretty general that this money has been misapplied, and that agents supported by the fund are bringing odium upon the district and antagonizing a very desirable class of citizens and taxpayers.

The automobilists meanwihle are not idle. An organization has been started at Long Branch which will watch the progress of the bill, and should common sense not come to their rescue at the session of the Council, they will be prepared to urge a fight for their rights. Enrollment of members will be made along the sea front from Seabright to Point Pleasant.

For, as it is no less important than the preservation of their rights on roads they aid in maintaining, it will be the aim of the organized automobilists to effectually suppress the practice of indiscriminate speeding pursued by some operators when beyond restraining influence.

IN THE BALKANS

Tourists to Bosnia and Herzegovina Have an Enjoyable Trip - Curious Natives.

Those tourists who accepted the invitation of the government of Bosnia and Herzegovina to follow up their run from Paris to Vienna by visiting these interesting and little known countries returned home entirely satisfied with their excursion.

Owing to the time taken on the run to Vienna only a few were able to continue the tour, and the special train from Budapest carried eight cars and twenty-one automobilists, among whom were Baron de Zuylen, Don Jaime de Bourbon and Baron Eynard. The railway journey finished at Youcani, a few miles from the Bosnian frontier, and the tourists then went to Jaice, where they had an official reception in the presence of a big crowd of spectators. The following day races were run off at Olidze in extremely picturesque country, and at the capital, Serajevo, the government entertained the visitors to a banquet.

They then continued on to Mostar and Raguse. After the bad roads of Hungary the automobilists were agreeably surprised to find such splendid highways in Bosnia and Herzegovina, and though they have been laid out primarily for strategical purposes they open up quite an unexpected touring ground for motor car owners in search of novelty and picturesque scenery, while the hospitality of the population is all that can be desired, if not a trifle embarrassing.

As the cars were the first ever seen in the country they were always surrounded by a big crowd, and even the tourists themselves, in their leather costumes and goggles, were an object of intense curiosity, each member of the caravan being accompanied by a long train of followers whenever he went on foot to see the attractions of the town. M. Journu says that he could not go into a post-office without having half the population at his heels.

This curiosity was not obtrusive, but was rather a naive and childlike interest in the men who had come, as it were, from another world in vehicles the like of which the Bosnians had never seen. In Austria the tourists had another experience of native curiosity, for they were amused, while dining at a hotel, at seeing a number of heads gazing through the doors and windows, and finding that the hotelkeeper had been charging the equivalent of sixpence apiece for the privilege of seeing the automobilists eat.

There was only one accident during the tour in Bosnia, when the car of M. Rugicku, of the Automobile Club of Austria, overturned and injured one of the government delegates, and it appears that some of the tourists found themselves stranded through relying too much upon the promises of the

tire makers, who failed to send tires to the different towns along the route as arranged. This is the first time that tourists have been to Bosnia, but it will probably not be the last, for the country is very easy of access, either through North Italy or by sea from Marseilles.

Figuring on Motor Ash Carts.

Commissioner Woodbury of the Street Cleaning Department has by no means given up the idea of using motor vehicles for collecting ashes. He believes that they will be a great improvement over the present horse drawn vehicles, and is devoting a great deal of time to a study of the question. Three firms of automobile manufacturers are now at work on the problem of concentrating in one vehicle cheapness and serviceableness, and although the task is not an easy one the commissioner has hopes.

The new aut mobile ash cart is to require the services of only one man, who will act as chauffeur and garbage collector simultaneously. It is to be covered with canvas, self-rolling, on a cylinder, on the same principle as a window shade, and is to have a top opening corresponding exactly in size with new garbage cans which it is the intention of the department to have adopted by all householders in the city. The new cans will be furnished with grappling irons, which, when suspended to a transverse bar on the cart, would act as hinges. Thus the can could be dumped with the same ease with which the lid of a box is lifted. The opening in the cart being exactly of the size of the can, no ashes would be spilled, and immediately the can is emptied the canvas top by rolling back automatically shut would prevent the dispersion of ashes by the wind,

The idea is borrowed from a bulky ash cart model submitted by a Berlin inventor, which only has the disadvantage of requiring four horses to move it and three men to operate it. By applying electricity as a motive power the necessity of the four horses is removed, and by reducing the bulk and the ash pockets the services of two of the three men are dispensed with.

The only obstacle at present is the cost, which as yet has not been reduced to within the limits fixed by Commissioner Woodbury.

So Kind of Them.

Automobiles are to be permitted to use the roads leading to the Southampton (L. I.) railroad station, after all—that is, as long as their owners or operators behave themselves. A prominent resident of that place is quoted as saying:

"As a trustee of the new depot grounds I am satisfied that for the present it is unnecessary to take any action restraining automobiles from coming to the station, as I believe all Southampton automobilists will be sufficiently considerate of the general public and appreciate the danger of bringing their machines into the midst of such a congestion of carriages as occurs at train time."

How considerate all this is, to be sure!

CUENOD PROTESTS

Thinks Staten Island Contests Were Limited to one Trial—Cups Withheld.

That the first trials only were to be taken account of, and that subsequent ones were mere exhibitions, is the rather strained construction placed by M. Ernest Cuenod upon the speed contests held at Staten Island on May 31 by the Automobile Club of America. Holding this view, he entered a formal protest against the awards in one class—that of the gasolene vehicles weighing between one and two thousand pounds—which protest is now being considered.

M. Cuenod's Rochet-Schneider car was a competitor in the gasolene class referred to, and there were two trials. On the first M. Cuenod's automobile finished first, in 1:22 4-5 for the mile; Mr. Percy Owen's Winton was second, in 1:25, and Mr. Jefferson Seligman's Mors was third, in 1:33 4-5.

The ground of the foreign visitor's protest was that his understanding of the rules was that there was to be but one trial, and that the subsequent ones were mere exhibitions. On the second trial Mr. Owen covered the course in 1:17 3-5, as against the Rochet-Schneider's 1:26 4-5, and was announced as the winner of the cup.

Soon after the trials M. Cuenod returned to Europe without having withdrawn his protest. The Automobile Club of America, out of courtesy to M. Cuenod, has retained the cup until its racing committee shall have passed upon the protest.

There is scarcely a possibility of the protest receiving more than a perfunctory consideration. The entry blanks stated plainly that more than one trial would be allowed. Pending the settlement of the protest, however, the medals to be awarded are all withheld.

Discussed Speed Ordinance.

At the meeting of the special committee of the Newark (N. J.) Board of Freeholders to consider the contemplated speed law for Essex ('ounty, a hearing was given the automobilists. President Scarritt of the Automobile Club of New Jersey, Mr. Baldwin, the attorney for the club, and the chairman of the American Automobile Association, addressed the committee on behalf of the autoists. The board will undoubtedly enact an equable ordinance.

Rhode Island's Committee.

The race meet of the Rhode Island Automobile Club, which is scheduled to take place at Narragansett Park in September; has been placed in the hands of the following capable committee: R. Lincoln Lippitt, Frederick C. Fletcher, F. E. Perkins and the board of governors of the club.



ENGINE EFFICIENCY

How That of the Internal Combustion Engine is Affected by Excess Heat.

The internal combustion engine is a very economical apparatus, in comparison with the steam engine and boiler, to which combination it corresponds, inasmuch as a very much larger proportion of the total energy delivered to the piston of the engine—or, to put it more correctly, released within the cylinder—is converted into mechanical energy, in the petrol or oil engine, than of the energy delivered to the water in the steam boiler, says the Autocar.

But, as so often happens in these cases, the increased efficiency of the internal combustion engine is purchased at the cost of certain troublesome features, principal among which is the fact that all parts of the engine heat considerably, and unless means are taken to cool them the engine itself will cease to work.

The inefficiency of the steam engine and boiler and the losses in the internal combustion engine are both due in part to the same cause, the delivery to the containing metal walls of the boiler and engine of a portion of the heat which has been delivered to the water, or the air in the cylinder of the oil or gas engine, but in the case of the engine and boiler the final temperature is not as high as that which is produced in the cylinder of the internal combustion engine. and, in addition to the difference in temperature, is very much more distributed in the steam engine and boiler than in the cylinder of the gas or oil engine. With the former there is a very much larger mass of metal to receive any heat that is given up to it by the water and steam in the process of heating and expanding, and there is also a very much larger surface of metal exposed to the atmosphere from which heat can radiate, than with the gas or oil engine. Hence the cylinder walls of the latter and the metals which are in connection with them receive a very much larger quantity of heat at each explosion of the engine than any part of the steam engine.

There are several troubles produced by excessive heat, if continued for an appreciable time. One of the most important is the whole of the engine expands, and in doing so it increases the friction of the working parts of the engine everywhere, and if this goes beyond a certain figure it may stop the working of the valves, etc., entirely, or, on the other hand, it may create passages through which the gas and air can escape, instead of passing into the cylinder or instead of remaining there during the compression stroke.

Hence some method of cooling the cylinder and the metal portions that are connected to it has to be adopted, and this has taken the form, almost universally, of a water jacket surrounding the cylinder and valve chamber connected to a reservoir of water, from which a constant circulation is kept up, the heated water rising to the top of the water jacket, passing thence to the top of the reservoir or water tank, the colder water passing from the b ttom of the tank to the underside of the water jacket on the engine cylinder.

It will be evident that this arrangement is limited in its application by the quantity and initial temperature of the cooling water in the reservoir, subject to any artificial cooling to which the water can be subject. Stated shortly, the cooling water has to abstract a certain number of heat units from the engine it protects, the number being sufficient to keep the engine at a working temperature. Time, of course, has its usual effect in all these cases. At every explosion of the engine a certain number of heat units are delivered to the cylinder walls, and a portion of these heat units are conveyed to the water in the tank. The capacity of the water in the tank for abstracting heat is strictly limited by its quantity and by the difference in temperature between it and the cylinder walls. Each gallon of water in the tank will absorb ten heat units for every degree of initial difference of temperature, and for every degree that can be artificially produced. With the stationary gas or oil engine no difficulty is usually experienced in the matter. If the engine tends to become unduly warm, an additional tank, or two if necessary, can be added. Cases often arise, however, where the trouble is met with.

To Guage Their Speed.

Proud of their speed gauging ability, two members of the Automobile Club of France have made a match. One has backed his capacity for estimating speeds against the other, and it is proposed to test the relative abilities of the wagerers in the following manner: The two gentlemen, accompanied by an umpire duly agreed between them, will travel in an automobile fitted with a speed indicator between Paris and Cernay and back again. During the trip each of the competitors will be required to estimate the speed at which the car is travelling the moment the question is put, and will be allowed ten seconds in which to make his His reply will be compared with estimate. the reading of the speed meter, and if he guesses within 10 per cent of that reading he will be considered to have scored a point.

Chicago Will get Foreign Cars.

Foreign cars are to cut more of a figure in the Chicago trade than they have done in the past. One or two agencies for French vehicles have already been placed there, and last week Thomas Myers, of the Central Automobile Co., New York, arrived in the Windy City for the purpose of looking over the ground. He took several cars with him and stated that more would follow them, comprising such makes as the Peugeot, the Mors, the Cottereau, etc. Arrangements for their sale will be made, negotiations having that end in view being already in progress.

CRANK SHAFT POSITION

Disadvantages of Placing it Below the Axis of the Cylinder—A Remedy.

The universal present practice is to place the centre of the crank shaft below the axis of the cylinder, says an English M. E. The writer considers this practice open to improvement. The objections to the method in vogue are sufficiently obvious.

All Otto cycle motors are single acting, high speed engines of accentuated type; in as far as the initial pressure is greater, more violently applied and more rapidly repeated—constantly in one direction, namely, on the downward stroke. This sudden blow, always applied in the same direction, throws a heavy strain on the connecting rod and crank shaft, and, in large power gas engines, necessitates crank shafts of about half the diameter of the cylinder. This is one of the mechanically weak points of all engines using the Otto cycle.

The question is whether the present practice deals in the best way with this defect. The prevailing method of locating the shaft line so as to intersect cylinder axis gives equal angularity to the connecting rod on its up and down stroke. The cycle, however, imposes all the working strain during the down stroke; consequently construction should aim at keeping the connecting rod in the most favorable position to withstand pressure in this period of the cycle.

In other words, the angularity should be reduced during the working stroke, being proportionately increased for the idle strokes; less angularity when the pressure is great, more angularity when it is slight. An additional advantage is that the crosshead is kept constantly pressed against one guide if the shaft is half stroke away from the axis of the cylinders, consequently there is no knock from bar to bar on turning centre. All that is needed to accomplish this is to set the crank shaft in advance of the axis of the cylinder.

This, as regards motors, would, as far as the writer is aware, be an entirely new departure; but it is not unknown in the modern single acting high speed steam engine; and the reasons for its use in the latter are certainly more cogent in the case of the former. In steam practice the Peache high speed engine, made by Davey. Paxman & Co., and the Westinghouse single acting engine might be cited as instances of this method of construction—a method which manufacturers might do well to copy.

Held Their Annual Meeting.

It is the practice of the chief executive officers, managers and salesmen of The Automobile & Cycle Parts Co. to meet annually and have a general pow-wow. The 1902 meeting took place at Cleveland, O., last week, and the value of such gatherings was testified to by those present.



"CASH OR PLATE"

Action of Long Island Club in Giving Winners Their Choico Raises an Issue—Some Opinions.

When the Long Island Automobile Club decided to give the winners at its race meet on August 23 at Brighton Beach their choice of cash or plate they threw a firebrand into the erstwhile quiet ranks of automobilists and raised an issue that must be settled without any great delay.

As the Motor World stated last week, the racing rules of the American Automobile Association, the race governing body, contain absolutely no reference to either "amateur" or "professional." No amateur line had ever been drawn. "Plate" had usually been the prizes awarded at race meets, whether held under the rules of the Automobile Club of America, the A. A. A.'s predecessor, or in the absence of rules. At the same time, there had been instances where cash prizes had been awarded. A notable case was that at the Guttenburg (N. J.) track in September, 1900. There cash, and cash only, had been doled out.

The American Automobile Association had not then, and does not now have, any intention of ranging itself on the opposite side of the fence from that occupied by nearly all other amateur sports promoting bodies. It has simply been taken by surprise. The matter of making an amateur definition, of separating the amateurs and professionals, had been neglected or overlooked, not deliberately ignored.

To see how the matter was viewed by the A. A. A. and other sports governing bodies, and to obtain confirmation or denial of the contention that the acceptance of a money prize would cause such recipient to lose his amateur status, the Motor World man interviewed the following gentlemen: President W. E. Scarritt of the A. A. A. and W. J. Stewart, chairman of the Race Committee of the A. A. A.; President J. E. Sullivan of the Amateur Athletic Association, and A. G. Batchelder, chairman of the Board of Control of the National Cycling Association.

"The awarding of cash or plate as prizes is a matter which is now receiving the attention of the Race Committee of the American Automobile Association," said President Scaritt, in reply to the question put him by the Motor World man.

"At present the racing rules of our association are silent regarding the matter. Whether they should contain a reference to it, that it, whether we should draw the amateur line, is now being considered. I must confess that it seems to be a pretty open question. There is much to be said on both sides. Some bodies, notably the Jockey Club, does not draw the line. Others, including most of the sport producing bodies, do.

"Personally, I incline to the belief that there should be a distinction made. Take the case of two drivers, one an expert professional, the other an amateur, and the former would undoubtedly have a decided advantage.

"Take Fournier as an example. No amateur driver would have a ghost of a show against him. Given equal machines, the Frenchman would win out, with a big margin to spare. That is an extreme case, of course, but there are plenty of others where the difference would be only slightly less marked. It is not right to pit the two classes of men against each other.

"Of course, we do not propose to act hastily in the matter. Any legislation that is passed will apply to the future only; it cannot be retroactive. The Long Island ('lub has announced its plans, and as they do not in the slightest respect conflict with the present rules it would be manifestly unfair to punish them or to take any action that would injure or reflect upon them.

Chairman W. J. Stewart of the Race Committee of the A. A. A., while not wishing to be quoted at length in the matter, confirmed president Scarritt's remarks. Nothing would be done, he said, until after August 23, the date of the Long Island race meet. But immediately after that and in time for the Detroit, Cleveland and Providence races, the question would be settled.

President J. E. Sullivan of the Amateur Athletic Association was much more outspoken than either of the A. A. A. officials.

"A man who accepts cash for winning an automobile race, or any other amateur contest, becomes a professional by that act," he said. "It does not make any difference whether it is contrary to the rules of his association or not. Common sense rules in the matter, and there is no getting away from it.

"If such a man came to us and wanted to compete under our rules we would turn him down in a minute. It would not make any difference what his association said. Unless it had an alliance with us, that is, in which case we would usually accept its ruling. But in an aggravated case we would not do even that, unless we thought there were extenuating circumstances to warrant us in doing so.

"There was our famous fight with the Trap Shooters," he continued. "Their rules permit the acceptance of cash prizes, and their men always shoot for cash. We told them that we did not consider such men amateurs, and would not permit them to compete at our contests."

"They raised a tremendous howl, of course. But that did not do them any good. We carried out our threat, and to-day no trapshooter who has accepted money prizes can enter our contests.

"But in cases where a governing body has reinstated a man, as in cycle racing, you have recognized such reinstatement," it was suggested.

"Yes, because our articles of affiliation call on us to do so. But there might arise cases where we should be reduced to accept this whitewashing. Where it was particularly flagrant, I mean,"

Chairman A. G. Batchelder of the N. C. A. Board of Control was next seen. His views coincided with those of President Sullivan. "There can't be any question about it," he said, "the man who accepts cash is a professional. The matter is worse where he has his choice of cash or plate, and choses the former.

"If an affiliated body vouched for the amateur status of such a man, however, we should probably acquiesce in its finding," he admitted.

Now the "Ardennes Circuit."

Scarcely have the echoes of the Paris-Vienna race died away than another speed contest is up for settlement. To-day (Thursday) the "Ardennes Circuit" is being made, and some fierce racing is certain to result. There are many old scores to settle, and a triangular course of 316 miles over fine roads, all in a day and without a stop, will offer a splendid opportunity for their settlement.

The race is being held under the auspices of the Belgian Auto Club, over a triangular course, which will be covered six times by the cars, making a total distance of 316 miles, and twice by the motocycles, which will be started in the afternoon when the vehicles have finished. Nearly eighty entries have been received, including most of the vehicles competing in the Paris-Vienna, and with a view of preventing collisions it is intended to make a selection of cars, so that only a limited number will be running.

The interest of this race lies in the fact that the whole of the distance will be covered without compulsory stopping. There will consequently be no time for cooling bearings or tires, and the race will in fact be more a test of tires than of vehicles themselves. If it can arranged, a captive balloon will be sent up in the middle of the triangular course, and with the aid of telescopes it will be easy to follow the incidents of the race.

Stock Went Begging.

No immoderate desire to acquire the effects of the defunct Milwaukee Automobile Co. was shown last week, when the second attempt to sell them—the first having been pestponed on account of the lack of satisfactory offers—took place. The entire stock, appraised at nearly \$20,000, brought just over \$3,000.

The trustee reported to the court that he had advertised the sale extensively. At the first sale there were no bidders present. The trustee adjourned the sale and advertised again, with the result that two bidders put in appearance. The trustee adjourned after receiving a bid of \$2,300, and then sold portions of the stock, which appraised at \$10,500, for \$2,100. At last three bidders put in appearance and finally the balance of the assets, appraised at \$8,700, were sold to Herman Falk for \$925.





Published Every Thursday

By

THE GOODMAN COMPANY.

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Entered as second-class matter at the New York, N. Y. Peet Office, November, 1900.

NEW YORK, JULY 31, 1902.

Cash Divides Amateurs and Professionals.

That an amateur should not accept cash as a reward for his prowess in his chosen field of sport has been an axiom time out of mind.

Automobile racing is a comparatively new sport, and it is not altogether surprising that until now the issue has never been raised. It differs from other sports sufficiently to raise a doubt at first whether the amateur definition should apply here. The machine is of vastly more importance than the man, even although one man is able to get more out of a machine than another not so proficient.

But it takes only a little reflection to convince a candid person that no good reason exists for the abrogation of the amateur rule, even with automobile racing.

Sport is sport the world over, and the man who takes his winnings in cash must be

placed in a different class from his rival who elects to receive his award in plate or similar gewgaws.

It is significant that there is not a single dissenting voice from the four gentlemen interviewed on the subject and quoted on another page. Not even the automobilist section does aught but admit that the facts are marshalled on one side. Cash is the line which divides the professional from the amateur, and no casuitry will avail to maintain the contrary.

An amateur clause does not now exist in the rules of the American Automobile Association, but the logic of events makes the framing of such a rule a moral certainty, now that attention has been called to the matter.

A Want, but no Opportunity.

On the one hand there exists a demand for chauffeurs—men of some mechanical ability, combined with knowledge of automobiles and at least ordinary intelligence—while on the other there is a disinclination to take the steps necessary to produce such men.

The trade no less than the public demand of would-be chauffeurs that they possess the requisite experience.

"But," say these men, "where are we to get this experience? Only by serving a novitiate, and the opportunity to do this is denied us. We would willingly fit ourselves for the task if we could get the chance, but this is just what we cannot do."

Usually chauffeurs are graduated mechanics, sometimes far from skillful ones.

There is, however, a need for a better class of workmen, and so great is the fascination of the motor vehicle that it could easily be filled if the way of applicants were smoothed a little

The importance of doing something to insure an improvement in the chauffeur class is one that can scarcely be dwelt on too strongly. More harm is done to the reputation of reputable cars by the incompetence or recklessness of their caretakers than persons not familiar with the circumstances would believe.

Framing the Reliability Contest Rules.

It would be indeed strange if the experience acquired since the first important endurance run, or "reliability" run, as it is so much better termed, should go for naught.

A year ago contests extending over one

day were almost unknown in this country. When the one from New York to Buffalo was projected the promoting club had to blaze its way into a great unknown. Not only the organization necessary for carrying such a contest to a successful conclusion, but the essential rules required for its guidance, were as little known as would those governing a New York-Chicago road race be at the present time were such a race permitted by the authorities.

It is true that there was the experience of the Automobile Club of Great Britain and other foreign organizations to profit by.

But the cases were so widely dissimilar that this experience was of little or no use. The industry here was in no condition to emerge with any great credit from a contest hedged round with drastic rules. As the event proved, even the extremely liberal ones, liberally as they were interpreted, then adopted were in some cases found to be unduly severe. The conditions of weather and roads encountered were such as to try the stanchest vehicles, and to place the hair mark of respectability upon any which came through with credit.

Within the year that has elapsed a vast change has taken place.

The industry has made great strides, and a day's journey of 75 or 100 miles over even passable roads has become a very ord nary occurrence. The car that cannot do this, and repeat it day after day, without undergoing extensive repairing, does not deserve to be placed in the first rank. One day nun-stop and so-called endurance runs have made this perfectly plain.

This being so, it is the natural thing for the Automobile Club of America to cast about for a set of rules that will hedge round the contesting cars with restrictions of reasonable severity.

The run to Boston and return, set for early in October, is of a character to invite such restrictions. Roads varying from fine to ordinary, with few or none that can be termed absolutely bad, a well settled country, an ideal season of the year—all conduce to make conditions that could not well be excelled. At its worst the run will be a very much easier one than that of last year; at its best it will be one that could not be bettered anywhere in this country.

It should be borne in mind that it will not be a junketing trip pure and simple, but one in which the compilation of accurate data of almost inestimable value will be one of



the most important duties devolving upon those taking part.

Therefore the main features already decided upon—such as the presence of an observer on each car, restrictions in the matter of repairs, a strict enforcement of the rules regarding maximum and minimum speed—are eminently wise. Whether it is wise to add to them, and just how they should be framed, are matters for careful consideration and discussion.

Such consideration and discussion the committee in charge can be depended upon to give them.

A Contrast of Roads.

That terrible second day's racing in the Paris-Vienna contest, down the mountains at top speed, over execrable roads, gave most of the European racing automobilists a new experience.

Such roads, they declared almost unanimously, were unworthy of the name and unfit for use by the class of cars that came to grief on them. Never again would they race on them. In future they would take care that the course of such important races was laid out with a full appreciation of the use to which it was to be put.

The complaints have a solid foundation in fact. The road was bad, so bad that only the most moderate speed was safe; yet it is a pretty safe wager that it can scarcely hold a candle to the average road in this country.

In and around the principal cities good roads are not rare. But when one goes out a few miles, or attempts a journey of any length, conditions just the reverse are met with.

The New York-Buffalo road is a case in point. We venture to say that no portion of the ride over the Arlburg was as difficult to traverse as almost the entire section between Schenectady—where the rain began last fall—and Rochester. The latter would have been bad enough in good weather; but when the rain descended and turned the courtesy roads into quagmires the proposition was a vastly different one. Impassable is a much used and abused word, but it fell little short of describing some of the stretches of the road referred to.

Whatever else could be said in condemnation of the Tyrolean roads, they at least had a solid bottom. They might be strewn with stones and logs and other things abhorred of Macadam and Telford, but these rested on something tangible and afforded a support for the whirling wheels, enabling the power

of the motor to be exerted to some purpose.

With the New York State roads it was very different. At times and in places they seemed to be almost bottomless. The straining vehicle skidded all over the road, and the wheels revolved without taking hold of the slippery surface beneath them, until all effort seemed wasted. Again they sank hub deep in a semi-liquid mass, and stuck there until they were pried or pulled out.

As a result of this state of affairs the Buffalo run drew attention to the disgraceful condition of the New York State roads.

For the best part of a week the daily press was full of the matter, and the fact was brought home to their readers as it never had been before. If they did not take steps to remove the disgrace they at least agreed that such roads were a mark of unprogressiveness, if not of uncivilization.

Such feeling is certain to become stronger as the good road building goes on and the influence which the automobile brings to bear becomes stronger.

Weights and Radius of Action.

The desire of the average automobilist to be able to go far afield should the desire seize him is evidenced by the increase in the radius of action of most cars.

Where a year, or even six months, ago the carrying of spfficient gasolene and water for a fifty or seventy-five mile run was deemed ample for all ordinary purposes, the tendency to-day is to equip cars with tanks designed to hold enough of these necessaries to last nearly or quite a hundred miles. The latter distance is fast becoming the standard. Most touring cars are capable of accomplishing it new, and it does not require any great sagacity to see that before very long even the lighter—vehicles—runabouts, etc.—will—be called upon to approximate this performance.

This gradual change has not come because all vehicle owners or users are in the habit of running up a mileage of 100 on frequent occasions,

Rather is it due to the desire to be able to do so when either the necessity arises or the whim seizes. The even century has a pleasant sound. It is much nicer to reflect that one can cover 100 miles without a stop, even if this is not done with any frequency, than to be hedged round with other limitations.

The increase in tank capacity is one of the influences at work affecting weights, or, perhaps, it would be better to say that it is one of the results of the latter tendency.

The tank capacity of the runabout and sim-

ilar vehicles was necessarily limited. There was not room to bestow large tanks, and the very considerable addition of weight caused by them when filled tended to make designers chary of fitting them. Changes in this particular would have rendered others necessary, and for awhile there was a holding back.

But the prevailing tendency is to increase weights. The light carriages—voiturettes as the French term them—are approaching the line that formerly divided them from the medium weights, just as the latter are encroaching on the ground of the heavy cars. It is no longer uncommon for a two passenger runabout to weigh 1,000 pounds, and occasionally it will reach 1,200.

Similarly, the latter, which usually ran between 1,000 and 1,500 pounds, now nearly always exceed the latter figure. If they are designed to carry four passengers the 2,000 mark is often passed.

With this evolution taking place, it is not surprising that the radius of action has increased if anything in even greater degree.

Steadily the number of automobiles in use increases, and by twos and threes, and even dozens, the horse is forced out of occupations that have been his from time immemorial. To outward seeming his day of disappearance slowly approaches, and he should set about putting his house in order against the time of his demise. As a matter of fact, he does nothing of the kind. He is sleek and well fed, happy and contented. His numbers do not seem to lessen nor his value to decrease. Any loss he may suffer from a utilitarian point of view is quite made up by his growing popularity in other directions.

Is it intentional irony, we wonder, that leads the Tribune to follow the account of an unpunished speed-limit breaking automobile trip of Reginald Vanderbilt with this item:

"Charles Brennan, employed by Austin Gray, was arrested to-day and fined \$10 and costs for speeding his automobile."

If a little of this sort of punishment were dealt out to master as well as to man, it would have a salutary effect.

With the 1902 selling season not yet over, makers are busy with plans for next year's vehicles. It is probable that designing in most factories is in a more advanced stage than it was a year ago, but actual work on stock machines is likely to be delayed for some time to come.





In an uptown pawnshop I was shown a watch last week which is somewhat intimately connected with the boomy side of early automobile history. The timepiece shown me had so many hands that no one but an expert could ever tell what half of them were for. There were a second dial, a minute repeater, a minute register and a chronograph, the entire watch weighing over seven ounces. The pawnbroker said that originally \$2,200 had been advanced on the watch, and though the loan was made almost five years ago he would be glad to be rid of the time teller for the amount named. Commenting on the watch, the man of loans said it had originally cost \$10,000, the works alone being valued by experts at \$4,000. The case is studded with 154 diamonds, 56 of which are gems. The largest stones are laid in a circle around both sides of the case, and when opened the backs of the stones set through the covers may be seen. On the back is a motor quad of the vintage of '95, carved in enamels, while on the front cover appears the initials of the original owner. "E. J. P.," done in diamonds to the number of 98.

As the watch lay upon the showcase of the pawnbroker's it told in its flashiness the story of a man who did much to prevent the automobile taking from the very beginning of its career the high position which its intrinsic merits would have given it had its early exploitation not fallen into the hands of such men as the one whose easy begotten wealth, in its anxiety to prove that a fool and his money are soon parted, had gone for such baubles as this watch, which weighed almost half a pound and cost \$10,000. Times have changed for the better, and the automobile industry is now so firmly established that adventurers of the "E. J. P." stamp have but little opportunity to enter it. This idea is not held by E. J. P. himself, however, since the papers only last week recorded that he was in one of the smaller Western cities "looking over the ground for the purpose of erecting the largest automobile factory in the world," provided the citizens would put up enough cash to warrant him doing so. I am afraid the future holds but few \$10,000 watch possibilities for even this master of automobile hanky-pankyism, however.

If the unexpected in a motor always happened, as some are fond of saying it does, it would soon cease to exist.

When it comes to the fine art of legalized highway robbery, commend me to the gentle Jehu who drives a cab! There is a gentleman to the manner born, and his manner is something to which no one but he could ever hope to have been born. If the theory of

reincarnation be true, then I know in what form the pirates of former days come back to earth-they are cab drivers. Owing to a not altogether unexplainable preference on the part of the public for the well lighted, cleanly and rapid electric vehicle, the owners of prehistoric cabs have of late found their ability to rob the public greatly lessened. Naturally the spirit of their buccaneer ancestors would not permit this invasion of cabmente rights, and both loud and deep have been their oaths and their threats against the new vehicle in consequence. Great, therefore, is the rejoicing in piratedom over the decision just handed down by the learned Corporation Counsel of Washington, one A. B. Duvall, to wit: According to this modern Solomon, any vehicle which is not drawn by a horse, an ass or an ox is not entitled to be classed in Washington, D. C., as a "public vehicle"; hence it cannot wait for fares in front of public places or be permitted to use the public stands. How proud of the law and its officers such decisions as this make one! Think where the world would be to-day had it been necessary to have each improvement and bit of progress made by it passed upon by such wise men as Corporation Counsei A. B. Duvall of Washington, D. C.!

All motor vehicles are not handsome; neither are all those who ride in them, for that matter.

When I wrote last week that this Freeport crusade against automobiles over on Long Island was purely a press working affair I knew exactly what I was writing about. For reasons which are not necessary to record I did not care at that time to tell the whole story of the prostitution of judicial dignity involved in the crusade, Now that the cause for silence on my part no longer exists, I'll tell you a few facts regarding the prime instigator in the affair, which will give you a much clearer insight of how "justice" is dealt out down on Long Island. The plans of the Freeport freebooters are exceedingly simple. First, no Long Islander is ever molested, except when accidentally he is mistaken for other than a native. Second, no squeeze is attempted on the outgoing automobilists, the idea being to size up the game as it passes through Freeport outward bound, so it may be more thoroughly plucked upon returning, while at the same time permitting the bag to be larger, since the arrested ones will have no opportunity of warning other automobilists of the danger they are in. When the tide of motor traffic turns New-Yorkward, then the Freeport trap is set. The furniture van is driven down the road, the Waterbury watches are oiled up, the checkers, flaggers, warners and other "officials" necessary to permit of every male Freeporter having a share of the graft are all theatrically placed and the game is on. The first unfortunate automobilist, who is adjudged not to be a Long Island one, passing the first signaller is duly "timed," flagged, held up by the van, arrested, taken

before "Judge" Wallace, fined and turned loose. Then the trap is reset, and the next automobilist meets the same reception. On the following morning the New York papers all contain lengthy stories of how the valiant and virtuous villagers of Freeport, defending their homes and firesides, had, at the risk of their precious lives, arrested this New Yorker or that for rushing through peaceful Freeport at speeds varying, according to the official Waterburyers, from forty to sixty or more miles per hour.

How the New York papers get such extended and detailed reports of all these happenings in a Godforsaken little Long Island hamlet might seem strange, but if you want an explanation of the cause of the whole thing, and of the reason why these outrageous doings have been given such unusual prominence in the papers, take up a telephone directory. Turn over the pages until you come to Freeeport, and there you will read, "Archer B. Wallace, 37F; news correspondent." There's the whole thing! You see, as "Judge" Wallace this prominent Freeporter catches automobilists and fines them, then as "Correspondent" Wallace he duly rushes a story into the daily papers telling all about who the unfortunates were, how much they were fined, etc., etc., by the upright "Judge" Wallace. An excellent, and, I suppose, a very lucrative, arrangement for Correspondent-Judge Archer B. Wallace and his assistants; but what chance the poor automobilist has is not quite so easily determined by one who is not a freebooting Freeporter.

Enamel and varnish are only skin deep, but they constitute much of a vehicle's beauty just the same.

. . .

I hope I am not betraying any secrets, but a correspondent who assures me he is second assistant head waiter in a Newport hotel. and is therefore qualified to speak authoritatively in such matters, writes me that "it is no longer dernier cri to have horses in society." My correspondent tells me that the leaders of Newport swelldom have decreed that horses shall only be used to ride; for all other purposes the automobile's the real thing. Further, my informant informs me that all of this has added greatly to the Newporter's help problem. Your chauffeur declines to be classed as a servant; he demands a room and a table for himself. When these are not forthcoming he leaves you in the lurch, finding plenty of employers ready to take him at his own terms, which, by the by, are decidedly high, both from a personal and a pecuniary point of view. Already even Newporters are looking back to the premotorific era, when there were no chauffeurs and "servants were not above their masters." Verily, progress is no cheap thing which can be enjoyed for the mere asking. Formerly it took money to make the mare go; now it takes motors to make the money go-fast.

THE COMMENTATOR.



Some Tire Hints.

In summer time tires are more liable to injury than in the winter, consequently greater care should be exercised. The precautions are always the same, but few automobilists appear to put them into practice.

First, use plenty of French chalk whenever a cover is removed and replaced. Secondly, carefully avoid any twisting or folding of the inner tube when returning it within the cover. When the air tube has been inflated sufficiently to take its circular form examine carefully to see that even then no nipping is taking place. Thirdly, pump the tire up hard; do not be afraid of bursting the cover. If you have blown the tire too hard the subsequent hard running of the car will make this known to you, and some of the superfluous air may be allowed to escape until the car runs normally again.

Fourthly, never run even a quarter of a mile on a deflated tire. Even in that short distance you may ruin an expensive cover. Fifthly, never, under any consideration, replace a repaired punctured tube or a new whole tube without making a rigid search for and finding the cause of the puncture, be it nail or flint spar, and withdrawing it from the cover. Sixthly, be particularly careful to patch the cover on the inside, even when the puncture is of the smallest dimensions, for, as the puncturing agent has passed through the fabric, a passage for water has been made, and the fabric will, sooner or later, begin to r t at that point.

Seventhly, be careful to screw the mushrooms well down on to the inside edges of the cover, in order that it may be well held to the rim and no strain may be thrown upon the valve.

Court Will be Severe.

Short shrift is what speed-indulging automobilists are likely to get in the Court of Special Sessions, this city. A case came before the court last week, that of Harry G. Larcum, chauffeur for J. F. Detmar, of Tarrytown, who was arrested on July 13, and in imposing a fine of \$50 on him Judge Holbrook, the presiding judge, said:

"The reckless speeding of automobiles in this city is getting to be a serious matter. Chauffeurs seem to think that horsemen, pedestrians and others have no rights that they are bound to respect. This court is determined to put a stop to this manner of breaking the law. It seems proper to us that it should be made known that we have made up our minds to impose the maximum fine in these cases, except under very extenuating circumstances,"

Returns After Hard Campaign.

W. K. Vanderbilt, jr., is expected home this week, after an extended stay in Europe, during most of which time he devoted himself to automobiling. He will probably bring with him the Mercedes-Simplex used by him in the Paris-Vienna race.

An Old, Familiar Friend.

That good old varn of the bicycle's babyhood, the "cyclist's cough," has been rejuvenated and trotted out at the recent meeting of the American Laryngological Association as "Automobile Bronchitis." You can trust your swell doctor to keep his diseases right up to the popular fancy in amusements, even if he has to trot out a long abandoned former favorite, as in the present case. Makes me kind of mad, though, to see the doctors getting so careless as not to take the trouble to give their old diseases new names. For example, how much more terrifying it would have sounded if the alleged automobile disease had been introduced as "Gasolenius Gasparitus," in place of automobile bronchitis?-The Commentator.

Orange's Oldest Inhabitant Drives.

Although in his eighty-third year, and consequently one of the oldest inhabitants, Sheriff James H. Clark, of Orange, Mass., is a keen automobilist.

He handles his Grout steam carriage quite



as well as he formerly held the ribbons over his trotters, and rarely allows a day to go by without taking a ride.

Nor does he confine his trips to the town. He gets out into the country, and at present is planning a trip in Vermont, where he formerly lived, and has every confidence that he will carry it through without difficulty. Notwithstanding his advanced age, he has mastered the details of his car and has no trouble in operating it.

Repaired Santos Dumont's Motor.

Last week the motor used by M. Santos-Dumont to propel his flying machine went wrong. After a little tinkering with it, which came to naught, it was taken to Smith & Mabley's, on Seventh avenue, this city, and there put to rights.

Came From Ramblertown.

Thomas B. Jeffery, head of the firm of Thomas B. Jeffery & Co., Kenosha, Wis., makers of Rambler cars, was in this city last week.

To get approximately perfect combustion a mixture of 124 volumes of gasolene to 1,000,000 of air should be used.

All Quiet Along the Merrick Road.

During the week there has been a material relaxation in the vigor of the crusade waged against automobilists compelled to use Nassau County, L. I., roads. On Sunday no arrests were made, and the few vehicles which passed over the Merrick and other nearby roads were unmolested.

Perhaps the astute Trapper Niemann is but biding his time. The reign of terror over, automobilists will return to the tempting Long Island roads, and then they can again be "held up" and fined.

Knowledge that the American Motor League is preparing to move in the matter has leaked out. For this and other reasons nothing has yet been done. It can be stated, however, that plans are being matured by the association to make a test case of the matter, and it is expected that this will be done before any great time has elapsed,

Special Roads for Automobiles.

In a leading article recently the Vienna Morgenzeitung advocates the construction of roads which shall be set aside for the exclusive use of motor cars. Such roads, the journal thinks, should be substituted for light railways, which are more difficult and more costly to construct and more expensive to maintain. The Morgenzeitung considers it absurd for legislatures, committees and courts of justice to waste their time over the routes and construction of local railways instead of turning their attention to the automobile-the means of communication in the future. It would be only necessary, it says, for the State to make the roads; private enterprise would see to the development of the new carrying trade by motor car, which cannot supersede existing railways, but will supplement them in a most useful way.

Result of Perfect Combustion.

At normal speed, about 600 feet per minute, the limiting compression for gasolene is between 80 and 90 pounds per square inch. As gasolene consists entirely of hydrocarbon, the result of perfect combustion is a mixture of carbon dioxide, water vapor (steam) and nitrogen.

First on the Island.

What is said to have been the first automobile to reach the island of Mount Desert arrived at Bar Harbor last week, brought by General Samuel Thomas. It attracted considerable attention from the natives.

Enter the Standard Co.

An automobile storage station has been opened at 136 West Thirty-eighth street, this city, by the Standard Automobile Co. The Elmore gasolene car will be the leading vehicle handled.

Another new garage will shortly be opened in this city. Hayes & Dunn will be the proprietors, the location selected being on Fifty-eighth street near Madison avenue.



TWO TYPES COMPARED

Advantages and Disadvantages of Steam and Gasolene Vehicles set Forth.

Taking a Gardner-Serpollet car as a type of the modern steam vehicle, an English writer draws some interesting comparisons between it and the gasolene car.

"Concerning its readiness for use at a moment's notice, the gasolene car has advantages, for it takes something under ten minutes to preliminarily heat up the boiler in a Gardner-Serpollet car when quite cold. As against this, however, ignition devices on the former call for a certain amount of attention from time to time; all electrical apparatus is absent in the latter, batteries and coils or ignition tubes with their lamps being replaced by a small supply of methylated spirits and matches.

"When standing still and ready to start, the engine in one case is at rest and in the other is running. The consequent total absence of any vibration is a pleasing feature of steam cars, although, on the other hand, these machines require a certain amount of attention if left in this condition for any length of time, in order that the pressure on the fuel tank may be maintained. With the petrol engine, if fitted with a governor, its action is, under similar circumstances, entirely automatic.

"When starting, the adjustment of the reversing lever is equivalent to moving the change speed lever into the required position, and with the steam vehicle the hand pump also requires operation unless a self-starter can be brought into play. The foot pedal which opens the throttle valve resembles that on the other type of vehicle which, when released instead of being depressed, allows the main clutch between the engine and the change speed gear to engage. Owing to there being nothing in the nature of a flywheel or a governor on the steam engine, the actual start from rest tends to be more gradual, and with a car in the hands of an unskilled driver a less jerky start forward is made. On the other hand, however, a steam car cannot as a rule attain a high speed as quickly as its rival, and during this time the driver of the former has to devote more attention to hand controls.

"While running, the regulation of the levers which vary the cutoff and the stroke of the feed pumps corresponds with operating the change speed gear, the accelerator and the ignition timer. In general respects a Gardner-Serpollet car then resembles a petrol car fitted with a gradually variable speed gear, but the necessity for anticipating the adjustments, instead of really making them at the moment when the effect is required, is a drawback to its ease of manipulation, during an early acquaintance with it, particularly when travelling in heavy traffic. In points of view of silence, ease of running, small wear of moving parts and in the com-

paratively small loss by friction in the transmission gear, these steam vehicles have much to recommend them. More continuous attention, however, is demanded by their regulating levers in order to attain a similarly good effect in the way of desired speed. But there is no little fascination in and interest attached to this process.

"In the matter of reversing there is something very pleasing about the way in which the steam car acts, although no very strong points can be made by adherents of either system from the point of view of the convenience of the driver. On one hand there is something which goes against the grain with engineeers in the moving of gear wheels in and out of mesh, while on the other hand it is quite possible that on these steam vehicles the hand pump may have to be brought into use during an operation, which sometimes demands a good deal of the driver's attention elsewhere.

"On the score of reliability the burner, the vaporizer and the water tank require occasional cleaning out, for which the only direct equivalent on a petrol car is the cleaning of the ignition plugs. Supporters of either system might maintain that their cars were freer from delicate mechanisms by emphasizing less robust parts of their opponent's machines, but it is certainly not too much to say that both types of vehicles can be regarded as thoroughly reliable and little likely to give trouble if reasonably attended to. In both systems there are valves which may stick up or require grinding in.

"On the score of fuel consumption Gardner-Serpollet cars are not as economical as the majority of petrol cars, but on the other hand they consume a fuel which is cheaper and which has also other advantages. The running cost with both systems is of secondary importance, being sufficiently low to be negligible. The space occupied by the fuel tanks required for running an equal distance would probably be of even more importance; the driving mechanism of these steam cars, however, takes up comparatively little room. The water and fuel consumption truly limits the length of a non-stop run in the ordinary standard cars, but this is merely a question of tank capacity, and a distance of 100 miles is quite sufficient for all ordinary requirements.

"Many more comparisons could, of course, be made between the two systems; but those already mentioned by us are sufficient for the purpose for which they are given."

Natural Progression.

How values do grow, to be sure, whenever they are given the chance! Two of Lillian Russell's automobiles were burned last week, and the newspaper value estimate is at once "boosted" until it reaches the neat little sum of \$30,000. One of these, simply referred to as a "French machine." accounts for \$18,000 of this, while the other, the Red Dragon, is put down for a modest \$12,000. The stable was burned, too, but its value was insignificant—a trifling matter of \$2,500.

JAPAN AS A FIELD

Yankees of the East are Poor and Cannot Buy Many Automobiles.

"According to the most reliable information I am able to obtain, thirteen automobiles have to this date been shipped to Japan, but most of these still remain in the hands of the importers, who use them chiefly for advertising purposes," writes Consul General Bellows, from Yokohama.

"Automobiles are not named in the tariff schedules, but those brought here have been classed as carriages, which pay a duty of 25 per cent. There are no regulations for their operation and use, except as they come under the head of "steam plants," which can be operated only by a licensed engineer. This law has not yet been enforced against automobiles, but it is expected that it will be should their use become more general, and especially if there should be any flagrant abuse of their privileges by the operators.

"The Japanese are not a wealthy people, nor are they, even when possessed of wealth, much given to costly, extravagant or ostentatious forms of pleasure, and it is improbable that the automobile will ever become the toy of fashion or the mere pleasure vehicle that it is in Europe and America. Besides this, the country roads are too poor and the city streets too narrow and too crowded with children—who, in most cases, have no other playground—for automobiling to be indulged in freely and with pleasure.

"On the other hand, there is a fair prospect that automobiles may gradually come into use for purposes of business. I have been told that the postal authorities are now considering the advisability of purchasing automobiles for the transportation of the imperial mails at Tokyo. The mails are now carried in wagons or carts, each drawn by a single horse. The government must keep several relaps of these horses, which are a continual source of annovance and expense. Should the postal authorities decide to buy automobiles, those that are run by steam would be considered objectionable because of the real or fancied ranger of fire to the imperial mails. At present gasolene is exceedingly expensive here, but plans are in progress for its manufacture in this country. If these plans prove successful gasolene will undoubtedly become as cheap as in America, and its use for generating motive power will increase rapidly.

"There are only a few street railways in Japan, ome of which are electric lines; the others employ horse cars. An enterprising promoter might find it possible to establish a public automobile service, which, until additional street car lines are built, would meet with no competition, except from jinrikishas."

One of the new Toledo gasolene touring cars has been received at Providence, R. I. Its owner is William G. Titcomb, who represented the club at Chicago when the American Automobile Association was formed.



Looks to Alcohol as Future Fuel

The question of the fuel of the future is an important one, a contemporary remarks. On that depends the motive force.

Some, and they are men of deep thought, still hold that steam must eventually triumph all along the line. We cannot say that we can see any tangible reason for the argument at the moment. It is, we are haif inclined to say, a matter of faith rather than reason. No doubt in the heavier forms of automobile the cheapness and elasticity of steam and the greater simplicity of the steam engine to the general understanding must keep that corner open to it.

But the internal explosion motor must, we think, claim most of the automobile field. Its position, however, will never be quite determined until we have settled the fuel question. Nobody who has given the matter the most casual thought can accept gasolene as the finality in fuel. It is not universal enough; its supply does not seem inexhaustible; it is open to be cornered by one of those colossal combines with which the greed of the West has made us familiar.

At the moment it has no real rival, but we are on the road which leads to greater freedom. Count Rene de Knyff, who was all over a winner in the Paris-Vienna race until his car broke down, used a mixture of alcohol and petrol as fuel.

That, to our mind, indicates the line of future evolution. Alcohol is a product which every country is apt to raise for itself; therefore it appears to have the most essential element of universality and popularity. At the moment we cannot carburize it in a pure state with efficiency. But human ingenuity has overcome greater obstacles than that ere now, and we have no lack of confidence in suggesting that it will not fail here.

Buffalo Insurance Rates Affected.

Buffalo (N. Y.) automobilists are exercised over a threatened increase in insurance rates. The insurance people are known to have been in conference on the subject, and there appears to be no doubt that the rates will be raised.

Manager Frederick of the Buffalo Association of Fire Underwriters was asked what action had been, or is to be, taken by the association relative to raising the rates on buildings containing automobiles. He said:

"No definite action has yet been taken."

"But is not such a raise proposed?" was asked.

"It has been talked about," he replied, "but nothing definite has yet been done."

Now Ready for Cars.

The finishing touches are being put on the new automobile shed at Manhattan Beach. It has been in use for some weeks, however, in its incomplete state. The shed is at the western end of the grounds, nearly back of the southern end of the bicycle track and only a few yards from the railroad platforms. About twenty-five vehicles can be accommodated.

Grout's Latest Vehicle.

The latest addition to the growing family of automobiles is the new Grout touring car, which has just made its appearance. It is exactly what its name implies—a substantially built and comfortable car, with ample power to take it anywhere over any character of roads. It is convertible from a two to a four passenger vehicle, the extra seat being in front and so arranged that its occupants do not obstruct the view of those behind.

The car is rated at 20 horsepower, and carries water and fuel for a hundred mile run. It is so arranged that a condenser can be used if desired, which would, of course, run it on a great deal less water.

It is equipped with steam air pump, steam water pump, hand and automatic lubrica-

To Divert the Course of Dust.

Dust is the automobilist's bete noir. It accompanies him everywhere, even on the finest roads, and the best that he can expect to do is to alleviate the nuisance in some small measure. At the present time a number of devices are being tried to attain this end

One of them shown to a Motor World man last week promises well. It is fathered by Smith & Mabley, at whose place, on Seventh avenue, this city, it was seen. Attached to the back of the automobile, usually one with a tonneau body, are two light steel rods extending straight out behind; over these is stretched a sheet of canvas. The dust swirling from under the car as it sweeps along rises and meets the canvas shield, which it cannot pass. The dust is thus swept back



THE GROUT STEAM TOURING CAR.

tors; fire controlled from the seat, three separate burners running one, two or three as the operator may desire; an 84-inch wheel base and extra heavy springs.

This model is so designed that the front may be closed up when not in use. The rear has concealed panel for tools, and is also equipped with a faucet, wash dish, towels and soap. Under the front seat it is divided into compartments for the carrying of luggage.

To Test Tires.

It has been suggested that a valuable test of tires would be for cars to run at stated intervals over patches of loose, unrolled road material, and that the entered tires after the completion of the 3,000 mile run should then be tested to actual destruction.

Spaulding has a Good Season.

Business holds up well with the Spaulding Automobile & Motor Co., Buffalo, N. Y., nine vehicles having been shipped week before last. The factory is being run to its fullest extent. and left in the rear, instead of being sucked into the car.

After Mayor Harrison.

"Devil wagons" will not be allowed to speed through Glencoe, a suburb of Chicago. A steel cable stretched across the road is relied upon to stop them where moral suasion is not effective.

"Warn 'em first," says the Mayor, tersely, "and if they hit up the speed after that soak 'em for fair."

Furthermore, Glencoe's chief of police says that Chicago's executive is the most reckless of all the chauffeurs that drive their machines up the Sheridan Road. The chief has offered \$25 reward to the village patrolman who will capture the Mayor.

The Glencoe authorities say Mr. Harrison scorched through the village recently at top speed; so fast, in fact, that he could not be caught.

"We'll get him yet," said Captain Dennis.
"He has run away to Michigan, but some day he must return, and then—well, he'll find trouble ahead."



"ARROGANT FIENDS"

Are Automobilists According to Colonel R. Lawrence—Are Removed From Restraint.

Evidently "Colonel R. Lawrence." who is described as "one of the most prominent residents of Flushing," does not believe that there is moderation in all things. Apropos of the automobile speed crusade in Nassau and other Long Island counties, the gentle colonel indulges in this tirade:

"Since Goft's decision that justices have no power to afford the slight protection given by the emasculated Cox law, the arrogant flends have thrown off all restraint. The magistrates seem afraid to impose heavy penalties. In New Jersey recently two humble victims, who, in spite of their entreaties for the auto to stop, were passed at full speed, one killed and another horribly injured. Did the chauffeur stop? Not he. Relying on speed, he flew away; but a telephone to the ferry stopped him. Is he imprisoned? No; he is immediately bailed out and doubtless will find other victims.

"In the streets of Manhattan, after a furious chase, an automobilist was brought before a magistrate and admitted to bail, which was furnished by another justice, who, in spite of denials, was in the automobile. On examination he was discharged on the quibble of not going thirty miles an hour, as claimed by the officer who, by the greatest effort, overtook and caught him. Does any sane man doubt that this automobilist exceeded the legal speed limit? In Paterson, N. J., a man was murdered by an automobilist, who escaped.

"On Long Island, near Winfield, an automobilist ran into the rear of a wagon, throwing a man out on his head and injuring his horse. On being arrested a Flushing justice fined him the heavy penalty of \$1. (Doubtless the chauffeur thinks the sport cheap at the price.)

"Not long ago an automobilist had a child, the sole support of his widowed mother, sent to prison for throwing a missile at him. This same gentleman had just been tried and convicted of killing a child, the penalty being, if I remember rightly, \$3,500. Thus the tariff, as so far established, seems to be: Nothing for exceeding the speed limit; \$1 for pitching a man headlong from his wagon; \$3,500 for child murder; killing one man and maiming another, an offence bailable for \$4,000. Thus rich men, who should be the most careful and considerate of the rights of others, incite class hatred. A reckless violation of the law, an arrogant contempt for the feelings and lives of the people and non-enforcement of the laws by the magistrates make lynch law not only possible, but justifiable. If an adequate penalty can neither be imposed nor enforced, the people will take means to punish these offenders.

"On Long Island a feeling of hatred is growing that may result in an appaning

tragedy. At the junction of Broadway and Bell Avenue, in Bayside, large numbers of school children are obliged to cross the road morning and evening. A number of automobilists pass this point at great speed, far beyond the legal limit. The parents of these children are in constant dread for their little ones, and fear that the traffic of \$3,500 will hardly assuage their grief or quell the popular anger should one of these children be killed. We have no mounted police to stop these autos, and no means of identification. Initials in the back of these autos mean nothing, if they were discernible as the autos fly by in a cloud of dust."

Colonel Lawrence recommends that the cause of the people be taken up, that automobilists may hear and heed. "A law should be passed," he says, "requiring these vehicles to be licensed and numbered, the name of the owners to whom licenses and numbers are issued to be recorded, and the numbers to be put in a conspicuous place in front and rear of the auto; a reasonable speed limit. the requirement to stop at signal from horse owners, a rigid enforcement of the law, a penalty for violation or at least six months' imprisonment for the first offence, and longer for a repetition, while these reckless murderers should be punished by life imprisonment or electrocution."

What Mandery Thinks About Speeding.

"Because the automobile is a new thing there are a lot of people, who never get up to within ten years of the present, who are bound to kick about its exceeding the speed limit and all that sort of rubbish. When the bicycle was new there were the same kickers, but I can demonstrate that the automobile is more harmless than the bicycle, the street car, or even the horse and carriage."

This statement was made to a Rochester (N. Y.) paper by J. J. Mandery, who had just returned from the West, where he had been investigating the laws restricting the speed of motor carriages.

"In Rochester," continued Mr. Mandery, "the speed limit is eight miles an hour within the city limits. Street cars often go at double that speed, and people driving out the avenues are continually breaking the ordinance, and nobody notices it, but when an automobile is seen going nine miles an hour there is immediately a great flurry and a demand that the police enforce their 'orders.'

"The man or woman controlling an auto can stop quickly and avoid obstacles much more easily than the person driving a horse. So you see that there is little danger in motor carriages, and there is no reason why people should kick about their exceeding the speed limit."

It is a vastly improved garage that will be found by the patrons of the Park Square Auto Station, Boston, it having been given a thorough overhauling and new equipment having been installed.

TWO VIEWS

Automobile has not Come to Stay—Will be a Common Sight, Says Another.

"You pays your money and you takes your choice." Editor Burling, of the Center Moriches (L. I.) "Record," contends that automobiling is a craze, the ephemeral character of which will become apparent as soon as the rich men's sons tire of them or an outraged people rise in their might and sweep them off the face of the earth. Former Justice of the Peace Carman, of Patchogue, differs with him in toto. He holds that the automobile has come to stay and should be regulated, not persecuted and prosecuted.

It is worth contrasting the two utterances to show how widely men can differ.

"We believe the automobile, unlike the bieycle, has not come to stay. It is noticed that very few of the refined better class of wealthy residents of this and other communities use the auto," says Editor Burling. "The great majority of that class prefer their horses and carriages. Its use is confined mostly to the 'sporty' young men who desire to attract attention and cause a sensation by their reckless speed through thickly settled villages, regardless of the rights of others. Another reason why we believe the automobile craze will eventually die out is that a very large majority of the people of this country are opposed to their use, and that being the case, legislation will so restrict their speed and impose such severe penalties for violating the law that the automobilists will be unable to cause any more sensations, which will do away with the incentive for their use, and then the deathdealing machines will become a thing of the past."

"We are living in a speedy age, and if one can't keep up to the times, then that person must get out of the way," retorts Mr. Carman. "The auto is all right if properly used; the time will come when a machine whizzing through our streets at the rate of twenty-five miles an hour will be a common sight, and none of us will feel any worse for it. On general principles, I believe in the enforcement of all laws. There are plenty of people with fast horses protesting against automobiles who are every day violating speed ordinances. The machines should be more careful at street intersections."

Whipple Goes Abroad.

Although no less than twelve automobiles are now in the possession of Harlan W. Whipple, that well known member of the Automobile Club of America may add to his string. He sailed for Europe on the Bluecher last week, and will investigate the industry in France.

A list of electric charging stations in Northern New Jersey has been issued and is being distributed in the trade. These stations number upward of thirty.



LUBRICATION LOGIC

Matter is one the Importance of Which is Very Much Underrated.

The inexperienced motorist, because of his inexperience, is liable to look upon the lubrication of his engine as quite a small affair and of little consequence, says a contemporary.

After the motor has been studied for some time and its varying moods watched and thoroughly sifted for cause and effect, it will be found that lubrication of the engine cylinder plays a part second to none in securing efficient working.

A long treatise might be written on the special characteristics of suitable oils for use in internal combustion engines, but it is doubtful if this would be of real advantage to the actual motorist or driver, and as suitable oils for air and water cooled motors are to be obtained by asking for them the real point in selection devolves on the user, and when a suitable oil is once discovered the particular brand should be adhered to whenever procurable.

The troubles incidental to inefficient lubrication, however, are so grave that nothing should be left to chance in the matter of procuring the proper lubricant, and it is of greater importance on a tour that a good supply of the proper lubricant be carried than that a big reserve of gasolene be stored on the car. Gasolene nowadays may be precured almost anywhere, but engine lubricating oil of suitable character is obtainable with difficulty even in some large towns.

It is not necessary to mention any make or brand of oil, for there are several equally suitable; and most motorists quickly appreciate the merits of a suitable oil. Assuming, therefore, that the correct lubricant has been discovered, the remaining factor is the proper and equitable supply to the engine.

The oil may be supplied to the engine in three or four different ways. First of all, there is the common scheme of gravity feed, in which the oil is supposed to flow by reason of gravity, or the fact that the containing vessel is above the motor.

Another form of lubrication is the pump or piston method, in which a cylinder or receiving chamber is charged by suction and the contents delivered to the cylinder by the action of pressing the plunger, the period of charging being dependent on the driver.

A further requirement is shown in some of the up-to-date cars, in which absolute automatic lubrication is provided for in case nothing goes wrong, so that in proper working the subject of lubrication is outside the driver's attention, and appears to be one of the natural functions of the motor until something goes wrong.

There is, of course, the perfectly simple method of directly dosing the engine with the requisite amount of oil at a predetermined moment, but it savors somewhat of crude and elementary workmanship if in a modern car the lubricant cannot be introduced to the cylinder in some more mechanical manner. The chief trouble would appear to be the difficulty of transmitting the thick lubricant long distances through comparatively small pipes, especially in cold weather; and in this connection it is noticeable that some of the modern cars are fitted with oiling tubes fully double the diameter considered necessary a year ago.

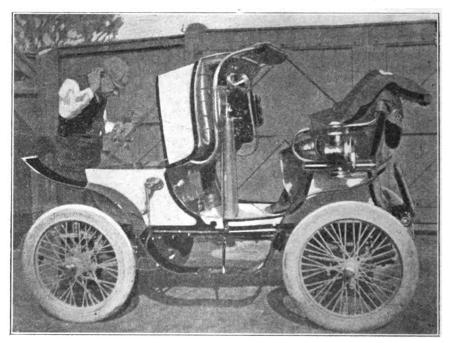
The real cause of failure in most lubricating systems will be found to be due to leaky joints or blocked passages, and it is not possible to best w too much care in the direction of making pipe joints thoroughly air and oil tight.

Except for the trouble of occasional dismounting for inspection, a gravity or forced

cluding the tours about the Water Gap, was 505 miles, and the total consumption of gasolene was 34½ gallons, or about one gallon to every thirteen miles, an expense of \$4.14, considerably less than a cent a mile. The consumption of gasolene on the trip from Asbury Park to East Stroudsburg was exactly ten gallons. The tires were punctured four times, and the rubber blew out of the water glass twice, but otherwise there were no accidents.

The Amateur Repairer,

Explanation seems almost unnecessary. The automobilist's puzzled look tells the whole story. The opportunity and the man are there, and it only remains to find the trouble. But where to begin to look for it?



WHERE SHALL HE BEGIN?

feed from the main lubricating supply to a sight feed lubricator on the engine crank chamber has much to recommend it, because any blockage in the connecting pipe is immediately apparent.

In the Water Gap Region.

An Asbury Park (N. J.) automobilist recently had a successful and highly enjoyable short tour to the Delaware Water Gap, a distance of 131 miles, in 10 hours and 10 minutes, and an actual running time of 8 hours and 10 minutes.

The route in detail was as follows: Red Bank, Matawan, Old Bridge, New Brunswick, Bound Brook, Somerville, White House, Lebanon, Valley, Clinton, Glen Gardner, Asbury, Bloomsbury, Stewartville, New Village, Washington, Oxford's Furnace, Buttsville, Bridgeville, Manunka Chunk, Ramseyburg, Delaware, Portland, Water Gap, East Stroudsburg.

A week was spent in touring in the vicinity of the Water Gap, and the return to Asbury Park was made over the same route as the going trip. The total mileage for the trip, inThat is the question and a knotty one it seems to be. Ignition, mixture, engine—which of the three is the more likely to prove the culprit? Only actual tests will make this clear.

Buffalonians Want More Rpeed.

A committee of seven, consisting of Drs. Smith and Martin, F. A. Babcock, E. R. Thomas and D. W. Sowers, of the Buffalo Automobile Club, and Colonel J. B. Weber and George N. Pierce, unattached owners of automobiles, was appointed at a meeting of automobilists of Buffalo, N. Y., to confer with the aldermanic committee on ordinances, the object being to obtain an amendment to the local driving ordinance that would enable the automobilists to have a little more license in operating their vehicles.

It was announced that an effort to secure an amendment of the speed ordinance was desirable, in view of the fact that the Common Council soon would adjourn for the summer vacation of one month. Something may be done this mouth. The aldermanic vacation begins early in August.

Pipped Them at the Post.

"Away they went over the smooth highway, leaving a cloud of dust and a rumble as of distant thunder behind. Miss Thomas's veil stood out straight in the breeze, but she never once wavered, but kept close on the heels of Mr. De Whitying's machine, waiting a favorable opportunity to pass him, With her teeth tightly clinched and her feet on the controlling levers and both hands on the wheel, Miss Thomas gave her machine full speed. In a sudden spurt her automobile took second place, and in a few moments she was alongside of Mr. Smith, who was working industriously at his oil pump. Side by side they went whirring over the smooth macadam, at times close to the embankment, but never once lessening their speed, It was fully a forty-five mile an hour clip when they struck the long hill that leads up toward Flushing. Here the extra weight of Miss Thomas's machine began to tell, and gradually Mr. Smith began to drop behind. Once ahead, with a free road before her, Miss Thomas dashed away from both competitors, leaving them enveloped in a cloud of dust. Gaining the top of the hill without lessening her speed, she dashed down a short, steep incline on the opposite side, and in a few moments brought her machine to a stop near the bridge over Flushing Creek to wait for her defeated rivals to catch up. She was covered with dust and was quite elated over her success in winning the race. It extended over between three and four miles, but no time was taken."

Such is the concluding paragraph of a story—not by Laura Jean Libbey, but appearing in the Journal—of an impromptu but exciting race between three "society" automobilists on Long Island last week. It is unfortunate that the Flushing instead of the Merrick road was the scene of the race, for had it been the latter Trapper Niemann would have been able to try conclusions between his furniture van and the irresistible monsters under notice.

Atkinson's Pointed Question.

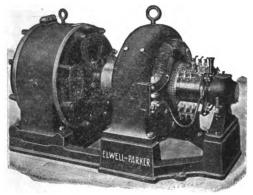
There are not wanting men who assert that the day of the steam locomotive is drawing to an end. Speaking at the commemoration dinner of the Baldwin Locomotive Works, at Philadelphia, a short time ago, its occasion being the turning out of the 20,000th locomotive, Edward Atkinson, the famous Boston economist, had the temerity to ask his hosts if locomotive No. 20,000 could convert into work more than 5 per cent or 6 per cent of the potential energy of the coal which was fed to it, and if it did not waste more than 90 per cent of the energy of the fuel, and then added these significant words: "The doom of the stationary steam engine is written upon the walls of the great works in which gas engines are now being made. I doubt if the iocomotive can ever carry a gas producing plant on its tender, else the doom of the steam locomotive would also be written."

To Keep out the Dust.

An ingenious and what is said to be an effective method of coping with the dust evil has been tried in England. The plan consists of so arranging the hood or top often fitted to motor vehicles that a dust shield or intercepter is provided. It consists in fitting the rear section of the hood with a pair of hinged stiffeners, which hold it felded back, and so provide a screen, higher than the heads of the occupants of the carriage, between them and the following dust cloud. If the side curtains are put on, dust over the sides of the car is also excluded. When not needed for dust the top can be folded right down in the usual way.

For Either Alternating or Direct Current.

The Elweli-Parker Electric Co. of America. Cleveland, O., are manufacturing standard storage battery charging machines for use with either alternating or direct current, of various sizes, for one or more vehicles. The sets for charging from the alternating cur-



rent consist, as here shown, of a single or polyphase motor direct connected to a D—C generator of suitable size. Both machines are mounted on a solid cast iron sub-base.

The charging machines built by this company for utilizing direct current for this purpose consist of a standard machine with two windings, one armature with two commutators, one winding and one commutator being for the high voltage and the other being for the low or charging voltage.

Both of these machines run automatically without sparking and without noise, and they are fully up to date in respect to electrical and mechanical design, workmanship and materials.

Soothing Their Last Hours.

Mechanically propelled vehicles are hereafter to be used by the Society for the Prevention of Cruelty to Animals of this city in taking stray dogs and cats to the pound. The first animal ambulance made its appearance on 125th Street last week.

Because of the many calls to care for dogs and cats in Harlem and uptown the society found it difficult to meet all demands promptly. Hence the automobile.

It is propelled by gasolene, and is painted a beautiful red and gold. No matter how dejected may be a ki-yoodle with a tin can tied to his tail, he can't help cheering up when he gets in this fine vehicle,

Visitors, not Residents, Offend.

It is the visiting automobilists, and not the summer residents of Southampton, L. I., who now make the trouble complained of by the people of that place.

The Southampton Village Improvement Association at a recent meeting passed resolutions authorizing the appointment of a committee to co-operate with the village authorities in obtaining the abatement of the dangers incident to the speeding of automobiles and motor cycles within the incorporated limits of Southampton.

Last week the committee mailed to every cottage a circular letter addressed to the residents of Southampton, in which they stated the purpose of the committee as appointed, and invited every one to communicate his views, as they desired to ascertain the sentiment of the community before taking active measures to enforce the existing laws. Included in the letter was a clear statement of the laws, which limit the speed of motor vehicles to eight miles within and to twenty miles an hour outside the corporation limits, and attention was called to the further requirements regarding the carrying of lights on machines and the stopping on signal.

The position of the committee and the feeling of the Southampton people were very well put by John B. Cauldwell.

"We anticipate no more trouble from our summer residents," he said, "who have been particularly considerate of late in the manner of running their machines, but considerable annoyance is to be expected from strangers touring the island, and therefore it has been thought wise to take some active steps. Our committee fully recognizes the rights of automobilists on the public highways, and it is our intention to suggest that the trustees use discretion in the interpretation of the laws regulating speed. Personally I feel that a rate of fifteen to twenty miles an hour around the lake and along the principal thoroughfares is exceedingly dangerous and should not be tolerated.'

A Lubricating Wrinkle.

A very usual method of crank lubrication in modern high speed engines is to fill the crank chamber with water to a depth covering half the crank pin on the down stroke, floating oil on the top. This plan has two advantages-the churned oil and water furnish better and more ample lubrication than oil alone, while the gradual evaporation of the water prevents the temperature rising over 212 degrees Fahrenheit. It would be worth trying the same plan for motor cranks. Provided, which with the piston fit and temperature does not seem likely, that water did not find its way into the combustion chamber, and that evaporation was not too rapid, the addition of water would not only improve lubrication, but very considerably cool the piston and cylinder walls, while at the same time providing a volume of lubricant enabling the engine to run safely should the oil supply temporarily fail. It is unnecessary to remind readers that the crank chamber must communicate with the atmosphere by pipe or otherwise.



Toledo Touring Car Reaches New York.

One of the new Toledo gasolene touring cars made by the Intérnational Motor Car Co., and illustrated in last week's Motor World, has reached this city. An inspection shows it to be an exceedingly handsome car. It is equipped with a 16 horsepower motor of the three cylinder vertical type, 41/4x51/4 each. Cranks are set at 120 degrees. The power is conveyed through a flywheel clutch of 161/2 inches diameter to the primary shaft of the transmission gear, which is equipped with the necessary sliding gears to permit three forward speeds. The reverse is effected through an intermediate pinion interposed at will between the first speed gears, thus reversing the direction of rotation of the secondary shaft. This shaft transmits the power by bevel gearing to the spur differential carried on the cross countershaft.

The countershaft is provided with two long bronze bearings attached to the frame of the vehicle, and a 16-tooth sprocket is carried at each of its extremes. The countershaft is provided with universal joints to compensate for any alteration of alignment due to road stress, etc.; %-inch roller driving chains of 1½-inch pitch carry the power to two 16½-inch 40-toothed sprockets bolted to the spokes of the driving wheels. The driving sprockets are also provided with 1½-inch brake drums, the band brakes being actuated by the outside hand lever.

The speed of the motor is controlled by a throttle governor attached to the inside face of the cam shaft gear. A hand lever controlling the spark lead is also provided and conveniently located above the steering wheel. A large float feed carburetter supplies the cylinders through an ample three way induction pipe. A branched exhaust pipe conveys the exhaust gases to a large cylindrical muffler placed at the rear of the car.

The main vehicle frame is of ash, interlined with steel flitch plates reinforced at the corners by forged angle pieces elongated to form spring carrying horns.

When advancing the spark to increase the speed above that permitted by the governor the action of the latter mechanism is suppressed by means of a small foot pedal; thus if pressure on the pedal is maintained the speed of the motor is entirely at the command of the operator through the medium of the hand operated spark lever. The advantage of this arrangement is appreciated when driving through traffic, as the speed of the car may be reduced from maximum to well under ten miles an hour without shifting the gears.

Successful Two Days Run.

The recent two day run of the Automobile Club of North Jersey was an unqualified success, and the innovation is bound to be popular. With the exception of a drenching received on the road to Hopatcong, after dining at Denville, nothing occurred to mar the run. The number of horses met on the road with a total absence of shying or frightening was commented upon.

Tells of the Rambler.

It is a very modest and plain statement of facts concerning the Rambler automobile that is given in the new catalogue just issued by Thomas B. Jeffery & Co., Kenosha, Wis. No attempt is made to put forth extravagant claims or to indulge in excessive laudation of the vehicle. Why it is better than the ordinary, what it will do, its ease of operation and simplicity of control—these and similar features form its theme. It is illustrated with attractive views of the Rambler, both with and without a top, and of various departments of the factory.

Can be Thrown out of the way.

No better evidence of the popularity of the wheel steering apparatus can be found than the extensive use into which it is coming. The illustration gives a good idea of the



device which Charles E. Miller, 97 Reade Street, New York, the well known parts house, is handling. It is well designed and constructed and handsomely finished. The hinged joint permits it to be thrown back when ingress or egress to the car is being made, and when placed in position again it stays there.

Chauffeur's Costly Ride.

After having been run into a ditch and nearly submerged, an automobile alleged to have cost \$18,000 caught fire and was destroyed near Long Branch, N. J., last week. It is supposed that the calcium carbide in the lamps became ignited when the water reached it, and the fire resulting spread to the gasolene and caused it to explode. The owner's chauffeur had taken the car out to give a party of his friends a ride, and he carelessly ran the car into the ditch.

Recent Incorporation.

Jackson, Mich.—The Jackson Automobile Co., with \$24,000 capital. The stockholders are A. Matthews, C. A. Lewis and B. J. Caster.

George F. Williams, of Watertown, N. Y., is erecting a plant in Dexter, N. Y., for the manufacture of gasolene engines.

All About Columbia Vehicles.

In covers of dark green, with the well known trademark of the company and the words "Columbia Automobiles" in gold, the new catalogue of the Electric Vehicle Co. is a handsome production.

Its twenty-four pages tell in an admirable manner the story of the concern's product, beginning with an introductory chapter in which it is stated that the operation of an electric automobile forcibly illustrates the success of inventive genius in transforming forces which exist in nature into practically applied mechanical power. It is shown how through the successive agencies of engine, dynamo and storage battery potential energy stored in coal is converted into motive force and its application to the driving wheels of the vehicle reduced to extreme simplicity.

The catalogue deals chiefly with the company's electric vehicles, although it is noted in the preface that they are by no means neglecting the important field of the gasolene vehicle, and are devoting constant attention to developing new models of the gasolene type.

Seventeen models of Columbia vehicles are illustrated and described at length, including the company's various styles of runabouts, victorias, surreys, cabriolets, tonneaus, broughams, ambulances, delivery wagons, etc. Handsome halftone cuts are shown of each of the various models, and supplemented by ample descriptive matter. The last two pages deal with the care of electric automobiles and present the general directions for their care and maintenance.

Must Have Some Attention.

"When people realize that an automobile is not built like an eight day clock and learn to treat it accordingly, the greater will be their measures of satisfaction," said T. F. Merseles, vice-president of the International Motor Car Co., the other day.

"Immediately they purchase a car too many men are given to dismissing their coachmen and fancying that all that is necessary is to turn a crank and wind up the automobile as if it were an eight day clock. The same men know that competent help is necessary to care for their horses, and if they paid \$2,500 or \$3,000 for a launch their first move would be to engage the most intelligent engineer they could discover. It's a matter that needs more exploitation than it has received. Abroad the conditions are more fully appreciated, and as a result one rarely sees an automobile unaccompanied by a chauffeur."

For the Quaker City.

Still another route between Philadelphia and New York has been given and is highly spoken of by its sponsor, Charles E. Duryea. Starting from this end the automobilist should cross Staten Island to Tottenville, thence to Metuchen, New Brunswick, Cranberry, Hightstown, White Horse, Bordentown, Mount Holly and Camden. The road the whole way is in fine condition, except parts of that between Camden and Mount Holly, over which a trolley is being laid.



Batteries Show Great Improvement.

It will probably surprise some people to learn that the batteries of an electric vehicle have a longer efficient life than some of the other parts. It has been stated by an engineer who has had under his personal observation hundreds of electrical vehicles in daily service that the Exide battery is "better adapted to its work than some other portions of the equipment, and in point of maintenance cost is a smaller factor in the total expense than are, for instance, the rubber tires on the vehicle it runs."

A peculiarity of the Exide battery, manufactured by the Electric Storage Battery Co. of Philadelphia, is that it combines the three necessary features of a commercially successful automobile battery—high capacity, long life and freedom from structural weakness.

While batteries have been constructed and placed on the market attaining a phenomenally high mileage capacity, this result does not at all imply a commercially successful battery, as the increase in their maintenance cost far outweighs the advantages thus gained.

The Exide battery is the result of a most careful series of tests made by the Electric Storage Battery Co. in the operation of vehicles by the New York Transportation Co., this latter company, after a year or more of continuous service with seventy-five sets of Exide Accumulators, deciding that these batteries provide a sufficient mileage capacity for all classes of service, together with a cost of operation, including maintenance, which is reasonable.

Why They Passed it.

Along the New Jersey coast from Atlantic Highlands to Deal, below Long Branch, the roads fairly swarm with motor vehicles.

"I thought they were plentiful here in New York," remarked one Gothamite to the Motor World man, "but it is nothing compared to Long Branch. They are like bees there. At times they seem to outnumber the horsedrawn vehicles. It is a most extraordinary sight."

Perhaps this accounts for the passage of that Long Branch "blue law" making six miles an hour the maximum speed for motor vehicles. The horsemen's noses are out of joint.

The Week's Exports.

Antwerp—1 case auto vehicles, \$900. British West Indies—1 motor car, \$230. Bilbao—1 case auto vehicles and parts, \$175.

British Australia—3 cases motor vehicles, \$1.173.

Hamburg—1 case motor vehicles, \$2,000. Havre—7 cases motor vehicles, \$6,400. Gothenburg—1 case auto vehicles, \$466. London—20 cases motor vehicles, \$16,000. Odessa—2 cases auto vehicles, \$875.

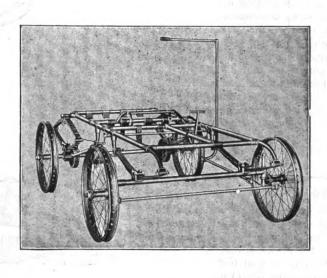
The victory of an English car in the Bennett Cup race is said to have stirred French blood to the "boiling point."

HERCULES RUNNING GEARS

FOR ELECTRIC AND GASOLINE VEHICLES

There are no weak spots in these gears.

Don't confound them with gears which have been hastily constructed to meet an early demand from automobile makers.



We also solicit orders for parts of these gears.

Their design is original and the construction is sound. Prices and particulars of construction sent upon application.

SMITH STAMPINGS FACTORY

Milwaukee

Wisconsin

Owners Also Need Education.

It is not only the Lenox (Mass.) horses which need to be educated to view the automobile in its true light; their masters are their companions in ignorance.

"The Lenox residents and cottagers have got to be educated to the use and rights of the automobile, the same way that horses have got to be educated to its appearance," says C. F. Bishop.

He finds that most of the opponents of the automobile and those who are most concerned about its presence are those who have never ridden in an automobile, and know nothing about it or what happens when a machine encounters a frightened horse on the highway.

He says that he has been inviting those who have never been in a machine to ride with him, and he is surprised to hear their comments on the operation and conduct of the machine.

The general belief among those who know nothing about the machine is, he says, that the automobile is a body shaking apparatus, wildly operated, leaving destruction behind it. After a ride in an automobile, Mr. Bishop says, those who had formed this opinion would have usually a change of heart, and he has become convinced that the public must be educated as well as the horse.

Liverymen in Lenox are sending their horses out each morning to the portion of the road where Mr. Bishop is conducting his experiments in making horses accustomed to the automobile, and with generally good results.

Both Sides go Armed.

Clubs and stones on one side, revolvers on the other, are, according to highly colored press dispatches from Lenox, Mass., being carried around by the residents and the automobilists, respectively, of that fashionable resort. This state of affairs is said to be due to communications printed in the local papers, declaring automobiles to be a menace to life, and calling upon persons in danger to protect themselves with clubs and stones.

Revolvers are now carried in every automobile in Lenox, to be used in the case of an attack, it being feared that any excuse will be taken to mob them. One automobilist says that the situation is worse than touring Italy, where there are brigands to fear.

When a Cab is not a Cab.

It is not easy to see by what process of reasoning a learned counsel of Washington, D. C., arrives at the conclusion that an automobile cab is not a public vehicle. That is his opinion, however, delivered in response to a formal request for a ruling.

It appears that A. B. Duvall, corporation counsel, has returned to the District Commissioners a communication of the inspector of backs in reference to the decision of the Court of Appeals in the case of the District of Commbia against the Washington Electric

Vehicle Transportation Company, together with the accompanying statement of the major and superintendent of police, which was referred to him for opinion. Mr. Duvall says:

"Responding to the question raised by the major and superintendent of police, I have to say that the effect of the decision in said case is to place all automobiles and other horseless vehicles in the class of private vehicles; therefore, they are not entitled to use the public stands and remain in front of public places when not engaged."

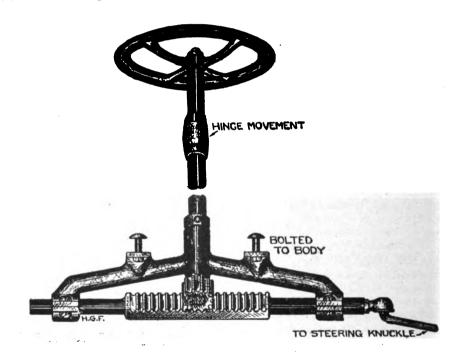
Can be Applied to Any.

No doubt there are many users of vehicles with steering levers who would like to change to wheel steering if the latter could be readily attached to present construction. For these the steering attachment illustrated

circumstances increases with the speed, and may furnish a tolerably accurate indication of the rate at which the commutator is reviving, and therefore of the speed of the car.

Invited him to Take a Ride.

It is a poor week that does not bring forth some allusion to the Thomas family, whose dealings with automobiles have been of a varied character. Edward R. Thomas figured again last week as the defendant in a suit, this time brought to recover damages for a dog killed, as alleged, by the broker's swiftly speeding automobile. The case, which came up in the Second Municipal District Court of The Bronx, before Justice Tierney, was brought by William McElroy, a roadhouse keeper at One-hundred-and-sixtyninth Street and Jerome Avenue, in which McElroy claimed \$250 for the loss of a St.



herewith is being marketed by the Neustadt-Perry Co., of St. Louis.

The direct operation is through a rack and pinion, and it is only necessary to give the hand wheel half a turn to give the full angles of the steering knuckles. Vibration is taken care of by means of the ball and socket joint,

An Electrical Speed Indicator.

A Frenchman, M. Hospitalier, has recently invented a novel form of speed indicator which is specially applicable to motor cars.

It is an electrical arrangement, and depends on the principle that a voltmeter deflected by interrupted currents will have its needle more or less displaced according to the rapidity of the current impulses. A revolving commutator is connected with some revolving part of the car, and the current from a battery, which may be the battery employed for working the ignition apparatus, is led in series through an induction coil, the revolving commutator and a voltmeter.

The deflection of the voltmeter under these

Bernard dog, which, he alleges, was killed by Mr. Thomas's \$17,000 automobile on September 24, 1901, while it was running twenty miles an hour.

Mr. Thomas, on the witness stand, said that the automobile was running three miles an hour. Alfred Lauterbach, who represented Mr. Thomas, contended that as the dog was not fastened his client was not liable for killing it. Justice Tierney reserved decision.

After the case had been heard Mr. Thomas invited Mr. McElroy to enter the automobile that had killed the dog, and took him to his roadhouse.

Said to Be the First.

Much satisfaction and a little pride is taken by J. M. Quinby & Co., the Newark (N. J.) carriage builders, in the complete success attending the turning out of an elaborate and expensive aluminum tonneau body, said to be the first made in this country, for a 16 horsepower Panhard.



Expects Great Improvements in the Future.

In addition to being an agreeable speaker, President W. E. Scarritt of the American Automobile Association wields a facile as well as a trenchant pen. Invited by the Newark (N. J.) Call to write for it his views on the permanence of the motor vehicle, he last week responded with the following letter:

"Dear Sir—Cheerfully do I accept your courteous invitation to write on the topic of automobiling.

"This is a subject which is to-day engrossing the time and thought, the skill and energy of many of the brainlest inventors and mechanicians of the world. It is also a matter of the keenest interest to a large and increasing army of automobilists the world over.

"The progress of the race is not unlike that of the individual; first it creeps, then it walks, with many a stumble and fall, then it runs with winged feet.

"History repeats itself in the development of the automobile.

"The Americans, if anything, are practical. They do not beat about the bush. They are not accustomed to going around Robin Hood's barn. The keen practical business American takes the shortest course between two given points. That is the definition of a straight line.

"The question is asked me again and again, 'Is the automobile a fad, or has it come to stay?'

"The answer to this is 'No' and 'Yes.' If the progress in the construction of automobiles has reached its limit, we must answer 'No.'

"But no one believes for a moment that we have reached the limit of the ability of manufacturers in this direction. Every day substantial progress is being made. The car of to-day, improved as it is, is far more reliable, stronger and more satisfactory in every way than that of twelve short months ago.

"A story is told of an old darkey in New Orleans. On seeing the electric street car for the first time, he exclaimed: 'Bress de Lawd! de white man freed de nigger, now he done freed de mule.' In a few brief years the self-propelled vehicle will emancipate the horse.

"The automobile of the future will travel between two points carrying its load of passengers and freight more speedily, more comfortably and more economically than it is possible for the horse to do. Therefore, the practical American will adopt it. He will adopt it because it pays to adopt it. He will adopt it because he cannot afford to do otherwise.

"At present the automobilist is a pioneer. The fate of the pioneer is always a hard one. The most serious objection to the automobile is that it frightens horses on the public highway, but this is not a sufficient reason why it should be kept off the highway or why it should be legislated against unjustly.

"The bicycle frightened horses, the trolley

frightened horses, and yet the greatest lovers of horses in the country would not vote to keep them off the highway. So it will be with the motor vehicle. It is a development, and an important development, of our modern civilization. It has just as much right on the highway as a horse, and no more. Careless, reckless, inconsiderate driving should not be permitted either by the horsemen or the automobilists. It would be unfair and unjust to charge the crimes of a few devil-maycare drivers against their class as a whole. This is self-evident, perhaps; nevertheless we find many who are criticising automobilists as a class for the sins of the few All we ask is the exercise of common sense, common fairness and common justice. The problem will work itself out. A little patience on the part of the users of horses, and a little consideration on the part of drivers of automobiles. and the thing is accomplished.

"The driver of the horse to-day will be the driver of an automobile to-morrow. The reverse of this is not true. The driver of the automobile to-day will not drive a horse to-morrow, or any other day, because he has learned better things."

Turned a Somersault and Died.

There is no telling where the ravages of the motor vehicle will stop. Down on Long Island, where the automobile is not exactly persona grata, the sight of one of these vehicles has scared a cow to death. "A big automobile," runs the veracious narrative, "in whizzing over the country road frightened to death a brindle cow owned by Charles Henry Howell.

"As the machine swept by, witnesses say, the animal turned a complete somersault and then stretched out dead.

"A veterinary surgeon said the cow died from heart failure produced by fright. With a shotgun and a warrant and papers in a civil suit Howell is anxiously watching a reappearance of the automobile."

Though Sleeping Car Line to Grand Rapids, Mich.

A Pullman Sleeping Car of latest construction is now attached to New York Central train leaving Grand Central Station at 4:00 p. m., daily, running through over the Michigan Central Station, arriving at Grand Rapids at 12:55 p. m., next day, connecting in Union Station for all points in Western Michigan. For information and sleeping car reservations inquire of New York Central Agents.

Air and Water Pumps.

THE UNION STEAM PUMP CO., BATTLE CREEK, MICH., has brought out a COMBINED AIR AND WATER PUMP; also a SINGLE AIR PUMP and a SINGLE WATER PUMP FOR STEAM VEHICLES. They are thought favorably of by those who have used them. They are a sturdy, well made machine.

HIGH DUTY STEEL BALLS

ACCURATE TO 1-10000 OF AN INCH



AUTOMOBILES

WE MAKE OVER 500,000

BALLS EACH DAY

THE AUTOMOBILE

CYCLE PARTS

COMPANY

Balland Pedal Factory

CLEVELAND, OHIO.

If it Were Possible to Carve Circles of Air

out of the atmosphere and to affix them to the wheels of a motor vehicle,



DETACHABLE TIRES

OUTCLASSED

Only air itself is more resilient.



Because its sidewalls are graduated in proportion to the tread and the air chamber is above the rim or flanges; it is not half buried in the rim.

THIS GIVES FLEXIBILITY-"LIFE" SPEED-COMFORT.

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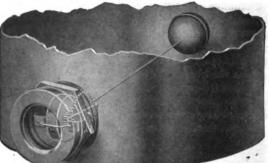
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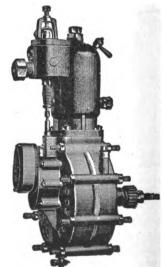
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The only device of its kind. Always tells at a glance all the gasolene that is on hand. Can be readily applied to the tank on any style of vehicle. Savea waste and quickly earns its price. Loss of air pressure, worn threads on plugs and fire dangers on and fire dangers on steam vehicles entirely

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KELECOM **Gasolene Motors**

IMPORTED.



1¾ h.p. Air Cooled.

2¼ h.p. " "

5 h.p. Single Water Air Cooled.

7 h.p.

9 h.p. Double

On the market abroad for five years with a fine record.

See results of 5 h.p motor in 100-Mile Endurance Run of Long Island Automobile Club.

Send for catalogue describing motors and new acetylene automobile lamps.

A. H. FUNKE.

98 Duane Street,

NEW YORK.

The Week's Patents.

704,767. Secondary Battery. Edward G. Steinmetz, Philadelphia, Pa., assignor to the Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 29, 1900. Serial No. 31,593. (No model.)

Claim.—1. Active material or material to become active consisting of a coherent mass of crystalline lead free from blow holes, the crystals of said mass being interrelated according to their law of crystallization, substantially as described.

2. The process of producing active material or material to become active which consists in making an amorphous body of lead compound, and subjecting the compound as a cathode to electrolytic action in a bath in which the compound is soluble, thereby changing its structure into the form of a coherent crystalline mass, substantially as described

704,859. Electric Accumulator Electrode. Victor Cheval and Joseph Lindeman, Brussels, Belgium. Filed Nov. 21, 1901. Serial No. 83,108. (No model.)

Claim.—1. An improved electrode for accumulator batteries comprising a mass of active material, a perforated envelop, inclosing the mass, and radial insulating arms projecting from the envelop, substantially as described.

2. An improved electrode for accumulator batteries, comprising a central conducting rod, a mass of active material packed around it and a perforated envelop around the mass with radial insulating arms secured to the envelop, said envelop being open at the top and bottom, substantially as described.

704,911. Friction Clutch, Ransom E. Olds, Detroit, Mich. Filed Feb. 25, 1902. Serial No. 95,612. (No model.)

Claim.—1. In a transmission gearing, the combination with a drive shaft, of a head loose upon said shaft, a head secured to rotate with said shaft upon one side of said loose head, a spring arm secured to the latter head having a friction block at its outer end in close proximity to the face of said loose head and means for pressing against said spring arm to yieldingly press said block in frictional contact with said loose head.

704,905. Explosive Engine. Carl W. Welss, New York, N. Y. Filed Jan. 15, 1900. Serial No. 1,474. (No model.)

Claim.—1. In an explosive engine, the combination with an explosion chamber or cylinder having a supply port and an exhaust port opened as the piston approaches the limit of its forward stroke, of means to introduce water into the chamber or cylinder as said ports open, whereby the water precedes the explosive charge.

2. In an explosive engine, the combination with a cylinder having supply and exhaust ports opened by the piston as it approaches the forward limit of its stroke, and means to discharge water through said supply port as it opens.

705,022. Explosive Engine. Wilhelm Bernhardt, Vienna, Austria-Hungary. Filed Nov. 24, 1900. Serial No. 37,652. (No model.)

Claim.—1. In a gas engine, the combination with the cylinder, of a chamber containing cooling liquid surrounding the same, an air inlet and outlet to said chamber both above the level of the liquid therein, and an exhaust pipe from the engine arranged to exhaust gas into said air outlet and thereby induce a current of air over the surface of the cooling liquid, substantially as described.

705,038. Vehicle Tire. James Christy, jr., Washington, D. C. Filed March 20, 1902. Serial No. 99,098. (No model.)

Claim.-1. The combination with a flanged

rim, of a rubber tire thereon, tie-wires extending longitudinally around the tire on opposite sides thereof, and laterally yielding bars embedded in and extending partly across the tire, said bars having heads forming retaining hooks under the tie-wires and enlarged bearing surfaces against and parallel to the inner face of the rim flanges.

705.175. Vehicle Tire. Charles H. Wheeler and Franklin W. Kremer, Akron, Ohio; said Wheeler assignor to the India Rubber Company, Akron, Ohio, a corporation of Ohio. Filed July 19, 1901. Serial No. 68.886. (No model.)

Claim.—1. A rubber vehicle tire having cross pieces embedded in the base portion thereof, each cross piece being provided with a head at one end only, the outer surface of the head being substantially flush with the side of the rubber tire; substantially as described.

2. A rubber vehicle tire having cross pieces embedded in the base portion thereof, each cross piece provided with a head at one end only, the body of the head lying within the rubber of the tire; substantially as described.

705,176. Vehicle Wheel. Charles H. Wheeler and Franklin W. Kremer, Akron, Ohio; said Wheeler assignor to the India Rubber Company, Akron, Ohio, a corporation of Ohio. Original application filed May 4, 1900. Serial No. 15,445. Divided and this application filed May 20, 1901. Renewed April 28, 1902. Serial No. 105,003, (No model.)

Claim.—1. In a vehicle wheel, the combination of a rim, a tire provided with a base piece, transverse recesses formed in said base piece, corresponding transverse pieces engaging said recesses, a channel composed of two side members secured to the rim, each of said side members being provided with a shoulder engaging a corresponding groove formed in the tire, and transverse rods in the base piece of the tire, the ends of said r ds extending under the shoulders of the side members, substantially as specific...

705,177. Vehicle Wheel, Charles H. Wheeler and Franklin W. Kremer, Akron, Ohio; said Wheeler assignor to the India Rubber Company, Akron, Ohio, a corporation of Ohio. Filed May 4, 1900. Renewed ay 24, 1902. Serial No. 108,789. (No model.)

Claim.—1. In a vehicle wheel, the combination of a rim, a tire, two side members secured to the rim, one on each side, and projecting beyond the periphery there f to form a channel for the tire, an independent ring located in the tire above the base thereof, and transverse rods located in the tire below said ring, substantially as specified,

705,304. Motor Vehicle, Charles T. B. Sangster, Birmingham, England, Filed Feb. 24, 1902. Serial No. 95,290. (No model.)

Claim.—1. In a metor car, the combination with the main driving clutch and the speed-change gear as set forth, of a shaft directed transversely across the framing of the car, a lever for controlling the main driving clutch, pedal levers for operating the back axle and counter shaft brakes, and a double-armed rocker for transmitting motion to the speed-change gear, said levers and the rocker being all mounted on said shaft, as set forth,

705,314. Carburetter. Francis C. Blake, London, England. Filed Nov. 5, 1901. Serial No. 81,270. (No model.)

Claim.—1. A double-acting feed device for use in petrol engines, comprising a flexible diaphragm forming the bottom of the suction chamber and having a spout, petrol being in-

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termittently fed into the suction chamber first during the lift of the diaphragm and by reason of the suction action of the piston, and secondly by the return of the diaphragm to its original position as the suction action

705,337. Motor Plow. Richard J. Gatling. St. Louis, Mo. Filed Sept. 6, 1901. Serial No. 74,530. (No model.)
Claim.—1. In an agricultural implement of

the character described, the combination of a drag member, a series of plows independently connected to said drag member, journals on which said plows are mounted, oil wells carried by said journals, and weights

mounted on said oil wells adapted to hold said plows depressed, substantially as described.

705,489. Motor. John Ulrich, Columbus, Ohio. Filed Oct. 28, 1901. Serial No. 80,259. (No model.)

Claim.—In a motor, the combination with a casing having a pair of power cylinders and a pair of valve cylinders, the former provided with a central fixed partition and ports on each side of said partition connecting the valve cylinders with the corresponding power cylinders and each of said valve cylinders having an exhaust port 36 and an inlet air port connecting with both said valve

cylinders, of a journaled shaft 7, valves 12 and 13 working in said valve cylinders and having peripheral recesses 14, arms 10 and 11 eccentrically connecting said valves with said shaft 7, a journaled crank shaft having a gear connection with said shaft 7 and provided with two cranks, a piston within each of the cylinders 2, said piston carrying a head on opposite sides of the central partition and driving arms connecting said pistons with said cranks, a rotatably mounted tool carrying shaft 37 in the forward portion of said casing, a gear wheel carried on said shaft and a pinion wheel on said crank shaft gearing therewith, substantially as specified.

CHAINS ARE MOST DURABLE. THE WHITNEY MFG. CO.. Hartford. Coan WHITNEY"



The VICTOR STEAM PUMPS.

Weight 41/2 lbs.; space required in carriage 9 in. in length x 3 in. in diameter.

AIR PUMP. Capacity 80 lbs. pressure on fuel tanks or tires in one minute, with a boiler pressure of 125 to 150 lbs. WATER PUMP. Capacity 3 gallons per minute against 200 lbs. boiler pressure.

PRICE, \$30.00 each.

These pumps have been adopted by the Locomobile Company, the Mobile Company and other leading manufacturers of steam carriages.

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The grade is shown by the location of a bronze ball running in a graduated concave tube filled with spirits.

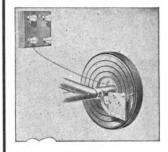
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Reliable Automatic Features
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INSURE Against Annoying Police Mistake Police Mistakes.



The Mott **Speedometer**

will enable you to ride up to the full, local, legal limits. There are 4 speeds and they can't be disputed.



Night viding is Safer, Pleasanter, Easier, when you have a Mott Cage Illuminator. We'll tell you more of what they tell you if you will write LAURENCE MOTT, 106 Sudbury St. Boston.

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WILL NOT SHRINK, SWELL OR WARP.

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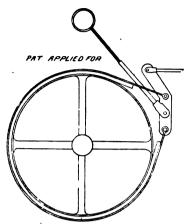
MUNGER AUTOMOBILE TIRE CO.. TRENTON, N. J.

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The difference between thinking and knowing

ought to be vital to you Better be sure than sorry Better write us.



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Our boilers received first prize for lowest fuel consumption in Long Island Endurance Contest C annon's racing car equipped with our 24 inch boiler, made 1-2 mile in 29 4-5 seconds. 300 lbs. steam at start, 305 lbs. at finish. 5 miles in 8 minutes, 26 3-5 seconds.

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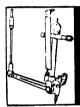
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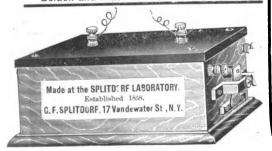
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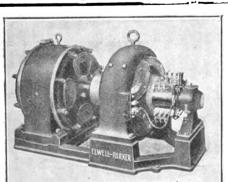
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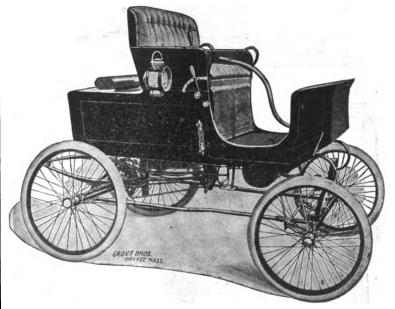
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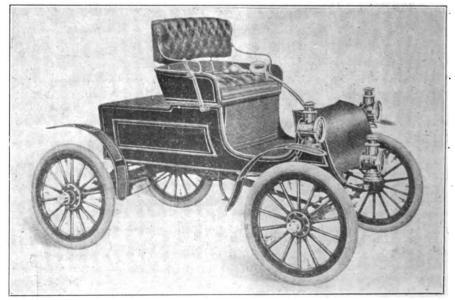
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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, August 7, 1902.

No. 19

FUEL RECORDS FALSE?

One Competitor in A. C. A. Test Confesses Culpability and Throws Blame on Judges.

As the story came out in the course of a personal conversation, it would be unfair to print his name. It is enough to say that he is among the shrewdest, best known and most expert chauffeurs in the metropolitan district, and one who has participated in practically every form of public contest that has occurred hereabouts, the New York-Bridgeport-and-back endurance run and consumption test among them. He fell to talking about the record of his carriage in the latter event, and as he talked he laughed a laughed that told volumes.

"It was awfully funny," he said, "and I'll wager that I was not the only man who was surprised at his remarkably low consumption of gasolene on that run, nor was my carriage the only one equipped with an auxiliary tank; in fact, I think most of them were so equipped. The judges didn't appear to be aware of the fact, however, and as they asked no questions and as I heard no one else volunteering information, I did not consider that it was up to me to say anything, and I didn't say it. The judges filled my main tank and announced my record, while I simply looked wise and held my The 'record' was several gallons less than I had ever used before in covering 100 miles, and I had covered quite a few centuries at that."

And then he laughed another laugh—a half guilty one, it appeared to the Motor World man.

Bloomfield has Speed Ordinance.

An ordinance has been introduced in the Bloomfield (N. J.) town council regulating the speed of automobiles and other vehicles. The measure restricts the speed of automobiles, bicycles and tricycles to eight miles an hour on a straight road and to four miles an hour when turning corners. A fine of \$20 is provided for violations. The ordinance massed its first mading.

Receiver Authorized to Sell at Auction.

The first step in the direction of getting the Automobile Co. of America out of the hands of a receiver, which was known to be impending, was taken a few days ago, when Chauncey G. Parker, representing the receiver, asked for an order authorizing the latter to accept a private bid of \$100,000 for the entire property. The vice-chancellor, however, held that the sale must be a public one and signed an order to that effect.

The order directs that the plant and property of the Automobile Co. of America, located on Jersey City Heights, be sold by the receiver of the corporation, Henry C. Cryder. The vice-chancellor appointed Charles L. Carrick a special master in Chancery to supervise the sale, which will be conducted at public auction by the sheriff. The master will fix the date, which must be after the lapse of four weeks, as required by law.

In his application Mr. Parker stated that the receiver had found the outlook for creditors very disappointing. This was due largely to the depreciation in the selling prices of automobiles. Machines which it was expected to sell for \$2,500 had to be disposed of at \$1,200. Mr. Cryder, it was further explained, had obtained an offer of \$100,000 from a coterie of stockholders and unsecured creditors. It was calculated that after reserving from the \$100,000 \$40,000 for holders of preferred claims, there would be \$60,000 left to distribute among the general creditors. The unsecured creditors hold claims for \$170,000.

Councilmen Object to Proposed Speed.

No action was taken by the Buffalo (N. Y.) City Council at its meeting last week on the proposed automobile speed ordinance, opposition having developed to the measure. At a conference between the Mayor and the committee appointed by the Buffalo Automobile Club speeds ranging from eight to fifteen miles an hour had ben agreed upon, but, as stated, this was objected to in Council. Consequently the matter went over.

Woman Tourist's Long Trip.

A Saginaw, Mich., young woman, Miss Nina Hay, is about to undertake an automobile tour from Detroit, Mich., to Atlantic City, N. J. The journey will be made with a party of frends in a car with a tonneau body.

MILE RECORD BROKEN

Vanderbilt Does the Trick at Paris—New Figures 48 2-5—Kilometer also Captured.

After withstanding all assaults for more than eight months, the one mile record of 0:51 4-5, made on the Coney Island Boulevard by Henry Fournier, has gone by the board. W. K. Vanderbilt, Jr., was the successful assaulter, covering a mile in 48 2-5 seconds and annexing the kilometer record of Serpollet as well.

The record breaking was done on the road between Ablis and St. Arnault, near Paris, on Tuesday. The times were taken by the official timekeepers of the Automobile Club of France. Vanderbilt rode the same Mors car in which he finished third in the Ardennes race.

The cut in the mile figures is a big one, no less than 32-5 seconds. Serpollet's famous kilometer record, however, made last spring in connection with the Nice trials, was beaten only 2-5 second.

For a number of months Vanderbilt has been striving to obtain a place on the record books. Until within a week, however, he was singularly unsuccessful. Accidents have pursued him steadily. But his streak of bad luck was broken at last, his success in the Ardennes race, where he finished third, being followed by this much greater one.

Asks Permission to Sell Plant.

An adjourned meeting of the creditors of the Steam Vehicle Co. of America will be held at the office of C. H. Ruhl, referee in bankruptcy, 534 Washington street, Reading, Pa., on Monday, August 11, at 1:30 p. m. The purposes of the meeting are the transaction of general business and the consideration of a petition presented by the trustee praying for permission to sell the plant and property of the company as embraced in the appraisement filed before the referee (excluding, however, five finished carriages, which are appraised at the sum of \$2,125) at private sale for a sum not less than \$10,-000. If any objections to the granting of said prayer are made they will be heard by the referee at the meeting.



ENGINEERS MARRED IT

Outsiders Made the Automobile Practicable— Official_Placing of Pa.is-Vienna Winners.

French Bureau Motor World.

Paris, July 25.—The automobile would long ago have reached perfection if it had been possible to apply the theories suggested by other branches of engineering practice and construct vehicles according to the calculations of engineers who finding that a certain power was required to propel a road carriage, took an industrial oil engine of that power and fitted it more or less ingeniously into an ordinary vehicle.

Believing that a solution of the problem was merely a question of engine power, it was supposed in the early days of the ine dustry that such a makeshift automobile wought to work satisfactorily, and inventors were disagreeably surprised to find that the noisy, ill smelling motor which rattled and shook the vehicle to pieces gave the public a poor idea of the value of the mechanical carriage. Algood deal had to be learned about the suspension of motors, and still more about the utilization of power, for these early vehicles were certainly able to travel along level roads, but when they came to hills the passengers had to get down and push behind, or else it crawled up backward with the reverse gear.

ENORMOUS WAST OF POWER.

The inventors of that day paid little attention to the absorption of power in transmission, and with 75 and 80 per cent of power lost in badly made gears it was not surprising that the 3 and 4 horsepower motors failed to move the vehicle when it had to povercome any resistance. We have even seen a catalogue, dating many years back, in which a maker offered cars carrying four persons and propelled by engines of 2 horsepower; but we are not aware that these vehicles were ever constructed, and, if so, they must have proved a sad disappointment to the manufacturer.

It is curious to-reflect at this stage of the automobile, itidastry, that mearly all the engineers making a specialty of gas and oil engines who took up the motor vehicle prob-,lem failed to do anything with it, and gave up the attempt as a bad job, under the impression that the automobile would never hecome a practical and satisfactory vehicle. The only engineer we know who saw the possibilities of the new vehicle once informed ,us that his early failures were due entirely to his having unconsciously applied the principles of the industrial oil engine, and when his experience with the carriage showed him that many new problems were constantly opening up he had to unlearn all that he ever knew in gas engine construction and start afresh. He confessed that his previous experience with industrial engines and his

prejudice against anything which meant a departure from accepted mechanical theories were a positive disadvantage when he began to tackle the automobile problem.

The motor carriage has been developed entirely by a class of makers who started with a perfectly open mind and had everything to learn, and were content to learn all they could during their experiments with the new vehicle. They were not prevented from trying devices because they did not seem to be good mechanically. They experimented with them first and improved upon them afterward, and eventually arrived at a very simple and efficient form of mechanism which is giving far better results than the complicated and highly ingenious devices of engineers who have never been able to make their clever but costly mechanisms a commercial success.

PANHARD THE PIONEER.

The man who took the Daimier motor in hand and for many years patiently worked upon it, putting it, as it were, into shape until he produced the first type of Panhard et Levassor car, was a maker of woodworking machinery, and his original transmission gear was practically the same as that which has come into almost universal employment. The late Emile Roger was even before Levassor, and always used to claim that he was really the pioneer in modern motor car construction, since he showed a carriage propelled by a Benz motor in the Paris Exposition of 1889.

He was, moreover, the first to adopt electrical ignition. We remember that during the first test ever held, between Paris and Rouen, one of his vehicles burned through short circuiting, and for a long time there was a very strong prejudice against electrical ignition on account of its supposed dangers. The influence of M. Roger's initiative has been less felt in France than in England, Germany and other countries, where the single cylinder horizontal motor has met with a good deal of favor and has been the precursor of similar types of engines for small touring vehicles; but as the single cylinder horizontal motor has been overshadowed by the four cylinder vertical engine, so the name of M. Roger is almost forgotten. It deserves at least to find a place among the names of other motor car ploneers. And yet M. Roger was a carriage builder who never had any previous training in gas engines. Another carriage builder is M. Jeantaud, who was among the first to build electric vehicles, and the long years of experiment he has carried out has done much to advance the science of automobile construction.

PEUGEOT AND DE DION.

Peugeot was a maker of bicycles and hardwares before he began to build motor carriages, and a company was then formed specially to undertake the construction of these vehicles. The Marquis de Dion has never had any training as an engineer. He has great mechanical instincts, and invented a

marine boiler which was for a long time employed by the French Government, and his association with Bouton forms a romantic page in automobile history. One Christmas Eve he was walking along the boulevards between the lines of femporary stalls where cheap Christmas gifts are shown for sale, when he saw a toy vehicle propelled mechanically, and the idea occurred to him whether it would not be possible to apply mechanical power to big carriages. He found out the name of the workman who was building these toys in a small shop, and from that moment began the partnership which has developed into one of the biggest automobile concerns in the world.

Darracq was formerly a partner in the Gladiator cycle business. He sold out his interest and started a big works at Suresnes for the manufacture of bicycle parts, and then followed this up with automobiles, for which he laid down an extensive plant of American machinery. Clément was also a bicycle maker, and Charron was first a bicycle and then an automobile agent, after being, of course, a professional bicycle rider. With the exception of Panhard, nearly all the firms have developed more or less out of the bicycle business; and this is one of the secrets of the rapid development of the industry, for where everything has to be learned those makers do best who go to work with an open mind and are not trammelled with prejudices of any kind.

THE NEXT BENNETT CUP RACE.

There is a good deal of discussion just now as to the future of the Gordon Bennett Cup. for the French automobilists are exceedingly sore at the idea of this trophy going out of the country, and they mean to do everything they possibly can to get it back. The Automobile Club of Great Britain and Ireland will certainly try to get the race next year run off in Britain or Ireland, and the course proposed is from London to Edinburgh, a distance of about 600 miles; but as a special act of Parliament would have to be passed to authorize the race, it is still very doubtful whether the necessary sanction will be obtained. The British have got an exceptionally good chance of giving an enormous stimulus to the industry if only they can get the prohibition against racing temporarily suspended; but, if not, the only alternative will be to run off the race on the Continent, when the English makers will, of course, find themselves placed at a certain disadvantage.

In any event it is to be hoped that the long spell of bad luck which has hung over the Gordon Bennett Cup is now at an end. The idea of the challenge was to bring together the best types of vehicles in the different countries, but so far the race has always been a failure. In 1900 there were five competitors, when the Belgian Jenatzy stopped through trouble with his tires and the American Winton smashed a wheel, while of the three French vehicles Chevalier de Knyff gave up through breaking a gear and Charron and Girardot were the only

ones to finish, with their earliages more or less damaged. In 1901 Levegh and Charron assete obliged to withdraw from the race through accidents, and Girardot alone finished, after he had spent some hours on the road repairing his clutch. This year again only one finished out of four starters, all the others being put out of the running by accidents to gears; and, singularly, on each occasion vehicles of exactly the same type have won the big races in much faster throat.

times. The Gordon Bennett Cup has never had a fair trial, but after three failures it is to be hoped that it will develop into what it was intended to be—the most interesting and instructive race of the year.

The official results of the Paris-Vienna race have just been published, and they give the complete times of 74 vehicles out of a total of 134 starting from Champigny, and this proportion is appreciably higher than in any previous race of this kind. Of the vehicles finishing there are 23 big carriages, 42 light vehicles and 9 voiturettes. The net racing distance, excluding the run through Switzer-

land and the neutralized towns, is 615½ miles.

The first six in each category are as follows: Big vehicles-Henry Farman (Panhard et Levassor), 16:00:30; Zborowsky (Mercedes). 16:13:29: Maurice Farman (Panhard et Levassor), 16:19:29; Teste (Panhard et Levassor), 17:13:28; Pinson (Panhard et Levassor), 18:00:41; P. de Crawhez (Panhard et Levassor), 18:05:20. Light carriages-Marcel Renault (Renault), 15:47:43; Edmond (Darracq), 16:10:16; Baras (Darracq), 17:04:52; Hemery (Darracq), 17:23:38; MarceHin (Darracq), 17:38:36; Tart (Clément), 18:26:45. Voiturettes—Guillaume (Darracq), 20:04:33; Grus (Renault), 20:17:54; Cormier (Renault), 23:22:37; Durand (Corre), 25:47:13; G. Rivierre (Georges Richard), 26:07:33; Lamy (Renault), 30:11:48.

Only two Mors vehicles finished the race, in 20 and 21 hours; but all the Gardner-Serpollet steam carriages got to Vienna, the best time for these vehicles being 22:27:38. Count Zborowsky on his Mercedes would have been first among the big vehicles had he not been penalized 36 minutes on the Austrian frontier, and the only other Mercedes in the race, driven by Baron de Forest, was not classified, because it broke the gasolene tank a few miles from Vienna and had to be towed to the finish by another automobile. Nearly all the Darracqs finished, as also did the Cléments, the Déchamps, the Georges Richards and the Gobron-Nagants.

In view of the exceptionally trying character of some parts of the course, the large proportion of vehicles terminating is a great victory for the industry, the more so as, despite the restriction of weight, the vehicles got safely through an ordeal which it was feared would have thinned out their ranks much more than it did.

There appears to be no opposition to the proposal to run the 1903 Bennett Cup race in Ireland. Roads decidedly better than those over the Arlberg can undoubtedly be found, and the necessary permission could probably be obtained.

ENDURÂNCE-CONSUMPTION

To Determine These was Purpose of Chicago Test—Results and Winners.

With 24 finishers out of 29 starters, 18 of them winning ribbons, the endurance run of the Chicago Automobile Club may well be set down a complete success. Nine of the eighteen award winners made perfect scores, and so closely did their drivers gauge their speed that in many cases they finished in seconds over their minimum time.

The start and finish occurred at the house of the promoting club. The roads were, all things considered, good. Bad places were encountered, but they were not sufficiently bad to interpose any great obstacle to the passage of the vehicles. There were a few accidents and minor happenings, the most serious of the former being the unexplained burning of a gasolene car. One arrest for speed violation was made, but it is alleged that the driver was made the victim of unauthorized persons.

The rules of the contest bore a strong resemblance to those of the Long Island Automobile Club in April last, blue, red, yellow and white ribbons geing awarded on a point basis. Two silver cups were awarded in addition, one to the non-club-member scoring the highest number of points, the other to the club member similarly excelling. A consumption test was also held in connection with the run.

The run was made over a hundred-mile circuit, going ten miles west of Jackson and Washington boulevards to Oak Park, then about forty miles north along the Des Plaines River, through Des Plaines and Libertyville, east to Waukegan, and south along the lake shore through Lake Forest and Evanston. At the end of every fifteen miles there was a control, at which an official was stationed. The rule was that the automobiles should not run more than fifteen miles an hour nor less than eight.

Of the light power machines the Murray, Olds, Pierce and the Rambler showed remarkable results in the line of minimum consumption of fuel. With the exception of the Pierce they are 4 horsepower machines, and all of them made the 100-mile run on less than four gallons of gasolene. The Pierce made the lowest record. It is a 3½ horsepower engine, and required only three gallons and one quart of gasolene for the entire trip. The Rambler used three gallons and three quarts, and the Olds three and a half gallons of gasolene.

Of the heavy power wagons, a Winton and a Packard consumed the least fuel. Each required six gallons and three quarts of gasolene.

At 7 hours and 16 minutes after the start F. X. Mudd crossed the line, and was followed by a number of others in rapid suc-

cession. The following table shows the arrivals:

- And Morder	Older Older Time Time					
Operator, finish, Frank X. Mudd I	start.		finish.			
Frank X. Mudd""I	/₁ ग ाः	9:06	4:22:35			
John E. Fry 2 =		9:07	4:23:38			
F. Illsley 3	3	9:08	4:23:40			
R. S. Wheeler 4	- G·	9:11.	4:24:50			
C. S. Mason 5	8	9:13	4:27:05			
F. J. Pardee 6	12	9:17	4:32:47			
John Farson, ir 7	20	9:25				
C. T. Jeffery 8	25	9:30	4:41:10			
W. G. Murray 9	23	9:28	4:43:00			
S. F. Symons 10	21	9:26	.4:48:10			
C. E. Bartley 11	16	9:21	4:44:55			
A. C. Banker12	18	9:23	4:58:53			
Roy D. Chapin13	4	9:09	5:11:39			
P. P. Pierce14	5	9:10	5:11:40			
J. D. Maxwell15	14 -		5:12:30			
C. A. Benjamin16	15	9:20	5:21:45			
R. R. Brown17	24	9:29	5:28:32			
Dr. F. H. Davis18	19	9:24	5:29:58			
M. Wigles 19	26	9:31	5:33:50			
M. E. Haywood20	17	9:22	6:00:45			
J. H. Mears 21	22	9:27	6:38:00			
E. A. Brown22	7	9;12	6:48:00			
Sidney B. Arnold. 23	9	9:14	8:44:00			
J. A. Holsman24	13	9:18	9:46:00			
///			0.40.00			

There was only one punctured tire, and one broken steering rod, though leakage of gasolene caused trouble in one instance.

The awards of ribbons went as follows:

O THE STORES OF THE STORE WELL	as 10	mows:
Operator and make.	ct.	Ribbon.
F. D. Mudd (Winton)	100	Blue.
U. S. Mason (Knox)	100	Blue.
M. Wigles (Olds)	100	
F. J. Pardee (Packard)		Blue.
P. P. Diames (Diames)	100	Blue.
P. P. Pierce (Pierce)	100	Blue.
John Farson, jr. (Winton)	100	Blue.
C. A. Benjamin (Locomobile)	100	Blue.
Roy D. Chapin (Olds)	100	Blue.
S. B. Arnold (Locomobile)	100	Blue.
F. J. Hisley (Autocar)	99	Red.
A. Gardner (Rambler).	99	Red.
R. R. Brown (Freedman)	99	Red.
J. D. Maxwell (Northern)		
S F Symons (Domble)	99	Red.
S. F. Symons (Rambler)	99	Red.
C. T. Jeffery (Rambler)	97	Yellow.
M. E. Haywood (Olds)	93	White.
C. E. Bartley (Winton)	93	White.
J. H. Mears (Murray)		w mite.
(muliay)	90	

*Very highly commended.

The silver cup offered to non-club members was won by P. P. Pierce, of Buffalo, and the silver cup to club members by F. X. Mudd.

Lap Race Will be Featured.

With a track a mile in circumference a 25mile lap race will afford an excellent chance to establish records for all distances. The first event of this sort to be held in the country is on the programme of the Long Island Automobile Club for its midsummer speed contest, to be held on the Brighton Beach racetrack on Saturday, August 23, the winner of each of the 25 laps to be entitled to an award. The event is a free for all, and should fill with cars of various motive powers. This race should prove attractive to Riker, Baker, Cooke, Walsh and a host of others who are interested in middle distance events. It is hoped that both Winton and Ford will enter their new high powered cars, regarding which so much has been said.

With the election of one hundred members at one meeting recently the membership of the Automobile Club of Great Britain reached 1,704.

EXPORT VALUES

Almost one Million Dollars Worth of Automobiles Sent Abroad in a Year.

There has so far been very little of the hurrah order about the exportation of motor vehicles and parts from this country. Considerably more has been said about the imports, while as a matter of fact that former outnumber the latter many times over.

It will come as a surprise, therefore, to many even in the trade to learn that during the fiscal year ending June 30 the value of such goods fell just short of a round million dollars. To be exact, the official figures show that \$948,528 worth of "automobiles and parts of," as they are designated, were sent abroad. For June the figures were \$131,150.

It is interesting to compare these figures with those reported for such old established businesses as railway cars and carriages, the exports of which have been popularly regarded as enormous. For steam railways the year's exports reached \$3,017,537, while for all other railways they only totalled \$788,816, or considerably less than automobiles. All other carriages, except cycles, are grouped under one head, the figures being \$2,490,063, or but two and one-half times as much as automobiles.

The exports of the latter are also growing rapidly, this year's figures witnessing a very steady increase.

Dinner to Bennett Cup Winner.

About one hundred persons, the leading automobilists of Great Britain being among them, sat down to the dinner given recently by the Automobile Club of Great Britain to Messrs. S. F. Edge and Montague Napler, the driver and designer, respectively, of the Bennett Cup winner.

Interesting telegrams and letters were read from well known men, and A. J. Balfour, the British Premier, wrote congratulating Messrs. Edge and Napier on their success, and referring with pride to the fact that the car was of British design and manufacture. M. Ernest Cuenod, president of the Swiss Automobile Club, wrote that Messrs. Edge and Napier deserved their best congratulations for bringing the international trophy to England.

But the greatest enthusiasm during the reading of the letters was reached when the chairman read a message from M. Charron, the first winner of the cup, congratulating Mr. Edge on his victory, which was also a triumph for the English industry. The cheering with which this greeting was received was renewed when, at a later stage of the proceedings, M. Girardot, the winner of the cup in 1901, formally handed the trophy to the latest winner,

Reliability Run Dates Changed :

An important change has been made in the plans for the forthcoming reliability run to Boston and return, to be carried out under the auspices of the Automobile Club of America. The committee having charge of the run met on Thursday last, and decided to change the dates from October 6 to 11, as originally planned, to October 9 to 15. This will make the run start on Thursday, October 9, reaching Boston on Saturday night. After spending Sunday in Boston the return journey will be begun on Monday morning, and New York will be reached on Wednesday evening. October 15.

It was also decided that it was inexpedient to return by a different route, an action that was foreshadowed in The Motor World last week. The route will therefore be via Norwalk, Bridgeport, New-Haven, Springfield and Worcester, returning the same way. Controls will be established at New-Haven and Springfield, both going and returning.

The contestants will rest over Sunday at Boston, and their vehicles will not be out of sight of the official observers during that time. The competing vehicles will be placed over night exclusively in charge of the official guards employed by the committee. The Park Square Depot, which can store five hundred vehicles if necessary, will be used for the Boston garage. Other capacious buildings will be provided for over night storage purposes at New Haven and Springfield.

Each vehicle will carry an official observer, who will be provided by the club, and the run will be open to all classes of self-propelled vehicles made in the United States or abroad. Rules and regulations will be announced later.

Cause of the Dejay

In explanation of the delay in publishing the results of the Paris-Vienna race, attention has been called to the monumental task confronting the official timekeeper, M. Tampier.

"Ever since the great race was over he has been working hard in order to place before the Sports Committee the results of the contest gathered from the reports of numerous controls. There are literally hundreds of controls, and an average of over ninety cars passed them, so that there are at least 9,000 calculations to make. Certainly twenty figures per calculation would be a modest estimate, and yet would total up to 180,000 figures, which would take 100 hours' continuous work at two seconds per figure, without allowing any time for copying, comparing, verifying and correcting errors. That is why the official results of Paris-Vienna are not yet published.

Seventy miles an hour is the speed of the new French racing car which Alfred G. Vanderbilt has ordered. It is further related that it is to be "painted maroon" and to have "yellow running gear,"

.

CALLED OFF

By Indignant Villagers was Freeport's Speed Crusade—Work of A. M. L. Officials.

A halt has been called on the Nassau County, L. I., autophobes. The indiscriminate arrests of users of motor vehicles, irrespective of the pace at which they go, has been stopped, owing to the opposition of the villagers to the practice. In all probability it will not be taken up again.

That a halt had been called became appar ent some little time ago. But the cause was not developed until last Friday, when two of the officials of the American Motor League journeyed down to Freeport prepared to defend W. H. Owen, who had been arrested when the trap was first set. In company with Owen, Attorney Isaac B. Potter, ex-president of the League of American Wheelmen, and now counsel for the League, and Secretary S. W. Merrihew, drove to Freeport prepared to undertake the defense of Owen, who is a member of the American Motor League.

Owen had denied the charge of exceeding the eight mile limit, and Friday had been set for a trial. Upon arrival at Freeport, however, it was found that the prosecution was not ready, the complainant, who was also the constable who made the arrest, being ill. A postponement was the result, Judge Wallace setting August 19 for the hearing.

A talk with President Dean of the village of Freeport brought out the cause of the change of front. Mr. Dean, who is an exceedingly pleasant spoken gentleman, said that the majority of the people were opposed to the enforcement of an unreasonable law. The reckless racing of automobiles through the village was condemned unreservedly and must be stopped. But there was no objection to the maintenance of a ten or even a twelve mile an hour pace, he said. In fact, he would have no objection to the passage of an ordinance legalizing such a speed.

Judge Wallace admitted that he also thought the eight mile limit unreasonable. In this opinion he bèlieved District Attorney Nieman coincided. But the law (the Cock's law) prescribed eight miles, and the District Attorney said there was nothing to do but enforce it. The protests of the Freeport people, however, availed to put an end to the prosecutions.

This pacific attitude of the local residents opens the way to a settlement of the matter in a manner that will be satisfactory to all concerned. It is along these lines that the American Motor League is now working, and with every prospect of success.

It is expected that the projected automobile bus line between Mount Holly and Burlington, N. J., will be in operation in a few weeks,



Published Every Thursday

By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING
154 Nassau Street,
NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Landon Office, 53 Floot Street, Paris Office, 2 Rue d'Abbeville,	:	:	C. W R. P.	V. BI COL	ROWN. LLINS.
Subscription, Per Annum [Postage	- • P:	id]			\$2.00
Single Copies [Postage Paid] .				10	Cents
Foreign Subscription		•			\$3.00
iavariably in Ad	tva	BC0.	,		

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

These who are interested in motor vehicles will find the inclinies and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address Motorworld.

Entered as second-class matter at the New York, N.Y. Post Office, Nevember, 1900.

NEW YORK, AUGUST 7, 1902.

How Many Days?

One feature of the forthcoming Reliability Run of the Automobile Club of America which seems most open to criticism is the number of days devoted to it.

Seven days appears to be an inordinate time, even although one of them is a non-riding day, to give to a tour of just over 500 miles. This means an average mileage for the six running days of slightly more than 80 miles. No one will contend that this is a severe test under ordinary circumstances.

The change of dates announced last week meant the addition of a day to the itinerary of the run. The added day is Sunday, and it is to be spent in Boston, presumably in sightseeing. On the face of it, therefore, Boston seems to be the key to the situation, the cause of the addition of a seventh day, a reason, whether good or bad, for not cutting the run down to five or even four days. Therefore it becomes a question whether Boston is worth all this.

A run of 500 miles seems to invite a division into five stages, with the extremely convenient 100 miles for the limit of each.

To go above 100 miles for each day's run is to set a mark that may be difficult to attain should there be rain. Otherwise it would offer no great obstacles.

But to go beyond this and set the first mark, or one of the intermediate ones, at 125 miles or more, is to do more than risk disaster; it is to invite it. Yet this must be done almost certainly if the schedule mapped out, viz., New Haven, Springfield and Boston for the days' trips, is departed from. There is no place between New Haven and Hartford or between Springfield and Worcester at which an all night stop for such a number of tourists as will participate could be made.

A plan that has been suggested is this: Make Hartford the first night's stop and Worcester the second; then the run to Boston and return to Worcester could occupy the third day, Hartford the fourth and New York the fifth. This plan possesses the merit of shortening the run by two days and yet avoiding any very lengthy runs. For these reasons it possesses some advantages.

It upsets present arrangements, however, and would involve an entire recasting of the itinerary. Whether it is wise to do this is an open question.

A Basis for Handicapping.

The weight classification of racing automobiles is but a step—albeit a long one—in the direction of providing a basis upon which these cars can compete somewhere upon an equality.

As has been repeatedly pointed out in these columns, the happy plan of weight divisions can be improved upon by making more minute subdivisions, a plan which is certain to be adopted, unless a still better method of classification is found. By so doing the injustice caused by placing cars of, say, 1,050 and 1,950 pounds, in the same class would be avoided and a more even contest assured.

But it is certain to be found before very long that even the classification system does not fully attain the object sought.

Contests will in many instances partake of a sameness such as will prevent any very keen interest being taken in them. Spectators will become conscious of a desire for something better, and from this feeling to a demand will be but a step. Race meet promoters will be forced to go forward and devise ways of providing more excitement for their patrons.

It is obvious that handicap races would do much to serve their ends.

The difficulty is to hit upon some satisfactory method of allotting starts. Shall the latter be based upon horse power, cylinder bore and stroke, weight, or what?

Horse power means nothing, for present methods of determining it are so defective as to be almost ludicrous. The stated horse power means absolutely nothing, and any attempt to ascertain the real power would be surrounded by almost unsurmountable difficulties.

Calculation of the cylinder dimensions is at best an intricate task, and if confined to this is of little real use. Compression plays a very important part, and if it is taken into the calculation the latter is made infinitely more intricate. Indeed, many people will contend that such a plan is not practicable.

Dispelling an Illusion.

It is assumed that the roads were made for horses—horses with vehicles attached usually, but for horses in any case. Their comfort and convenience must be regarded always. Anything that incommodes them is permitted under protest, if at all. So long has this assumption been permitted to pass almost unchallenged that it has acquired much of the force of an unwritten law.

It need scarcely be pointed out that the facts in the case are all the other way.

The roads are made for traffic of all kinds; not even vehicular traffic is permitted to have a monopoly of them, the pedestrian's rights being clear and well defined within certain limits.

The oldtime horse car was different from other horse drawn vehicles only in that it ran on tracks, while the 'buses which preceded these did not possess even this distinction. But the time came when the trolley took the place of the horse, and its course since then has but emphasized the fact that the streets and roads are property of the people, designed to be used for the purpose of transporting their owners from place to place in the most expeditions and comfortable manner.

The folly of even thinking of obstructing the progress of the trolley, with its high speed, death dealing as it is, is well understood by even the mossbacked obstructionist of the day.

demand will be but a step. Race meet promoters will be forced to go forward and fury from contemplating his impotence in this respect, and wreaks it upon the automobilist. He revives blue laws or enacts them where they do not exist. The most preposterous restrictions seem to him the height of wisdom, and he works unceasingly to turn back the hands of the clock and stay for but a period the progress of the motor vehicle.

His obstructive methods can prevail for only a little while, however,

The automobile must within a reasonably short time be recognized as a vehicle, endowed with not only the same rights and privileges that other vehicles possess, but with new and extraordinary ones bestowed upon them for precisely the same reason that those now possessed by the trolley car were bestowed upon them.

In short, the times demand such a means of transportation as the automobile affords, and the logic of events will compel the withdrawal of unreasonable restrictions such as are now hindering its development.

A Problem That Needs Solving.

It is just beginning to be realized that it is not nearly so easy to turn out competent chauffeurs as it is to manufacture automobiles

Once started, a manufacturer can grind out the latter with almost unfailing regularity. The demand will govern the supply, and as time goes on it will become the easiest task imaginable to increase the latter as desired.

But competent chauffeurs take time to produce, and the period of their novitiate is, with many of them, the sticking point.

No one wants a novice for a chauffeur. The owner of a car looks for a reliable man, one who can be intrusted with the lives of himself and family as well as the safety of the car itself. Until the chauffeur reaches this point—that is, until he really becomes a chauffeur—he is useless, as far as the aforesaid owner is concerned.

If we turn to the other horn of the dilemma, the school for chauffeurs, we find ourselves confronted with a very peculiar state of affairs.

There exists a disinclination to giving the would-be chauffeur a chance to become such. Sometimes this is due to an unwillingness to intrust valuable cars to inexperienced hands, such a weakness in the past having been accompanied by disastrous results. At other times it is due to a desire to keep the applicant at drudgery that brings some return to his employer, but does not advance the employe.

In the past there has usually been a sufficient supply of chauffeurs—of a kind.

If all that was wanted was a man who understood something about a gasolene steam engine, and who could run a car, it was easy to supply the want.

But such men were usually more enterprising than conservative, more reckless than cautious. They would rather race than observe the speed limit, or take chances on getting through a run than go over an engine and see that everything was right about it. In short, to them automobiling was a sport instead of a business, an avocation rather than a vocation.

It was inevitable that such men either adapt themselves to the changing conditions of the trade or make way for others who would.

That time seems to be near at hand. There is a steady and sustained movement in the direction indicated, and it comes from two quarters. One is made up of persons of a mechanical turn of mind, who are fond of "tinkering" about gasolene engines and other machinery, and who think that the occupation of a chauffeur would be to their liking. The second comes from the coachmen, who see that the horse is being pushed to one side and that they are lost unless they learn to handle the levers as they now do the ribbons.

Between the two there will in a comparatively short time be a marked improvement, and the selections of a competent and trustworthy chauffeur will not be as difficult a matter as it too frequently is at present.

The Only Real Solution.

In spite of the fact that it is anything but new, the suggestion of a Buffalonian, viz., that automobile speeds in cities should be graded to suit the localities in question is deserving of all the consideration that can possibly be given it.

If we reflect upon the matter, we can scarcely fall to be more and more impressed with the logic of this position. The speed that is reasonable and proper in one place may be excessive or absurdly inadequate in others. Yet lawmakers go on making one rule to cover widely differing sections, and we either submit without protest or protest feebly.

The most glaring example of the absurdity of this method is, of course, found in greater New York.

Five boroughs, covering many miles of territory, and extending thirty miles in one direction, are comprised in a single district, and in that district eight miles an hour is the maximum speed allowed, even on roads where there are neither houses nor road users to speak of.

If graduated speeds were fixed upon, say, ranging from eight to twenty miles an hour, the safety of both pedestrians and road users would be conserved, at the same time that the convenience, almost the necessity, of automobilists would be consided.

That such a plan will ultimately be followed is a pretty safe prediction.

It is the only way out of a pretty bad muddle, and as such will be recognized sooner or later. But a long time may elapse before the subject is approached in a sane and remonable spirit, and with a desire to do justice to all concerned.

Have had Their day,

12 83

:43. C

If anything were needed to emphasize the fact that 100-mile "endurance" runs barve seen their day, the Chicago function of last week would serve this purpose.

The affair was a success as far as it went; but it did not go very far. The number of starters was small, although not unexpectedly so, and the run appears to have been carried through in a manner almost beyond criticism, particularly if the limited experience of those in charge be had in mind. The large proportion of disisters and ribbon win ners bore testimony to the excellency of the vehicles and the skill of their drivers; but it also gave point to the contention that 100mile runs are not sufficiently out of the ordinary to call for comment or to warrant special events other than of a local character being held. It is as local events that runs of this kind are certain to be held in future.

In sections where the number of motor vehicles is small, or the roads are of an inferior character, 100-mile runs will for some time to come possess sufficient novelty or arouse sufficient interest to warrant their being held. But no especial attention will be attracted to them throughout the country.

Mercy on us! Another "arrogant automobilist" has on the way a new death dealing car of terrifying speed. "The White Ghost, a 50 horsepowered car, with a top speed of ninety miles an hour, was in London on Monday surrounded by an admiring crowd. The monster motor is on its way to America in charge of M. Paul Demeny," says the Autocar.

Happy owner! Unhappy public!



Reform administrations as a rule are rather more inclined to lessen the number of officeholders than to increase them. Reforms, like other things, however, often go by contraries, and in consequence of this here in New York the motor vehicle mass been given its first official recognition as a necessity for good government. One Beersthat, seemingly, is not good grammar; but it is, nevertheless-has been appointed "Locomobile Engineer to the Department of Dock and Ferries." Mr. Beers, L. E. D. D. and F., will have two assistants and \$2.50 per day. Just what Mr. Beers's duties are and why he should have two assistants to help him perform them, or \$2.50 per day in payment, are all things safely locked in the breast of Dock Commissioner Hawkes, who appointed Mr. Beers and his assistants.

It is not what a man has in the vehicle he buys that makes him satisfied therewith, so much as what he does not want in it.

. . .

. . .

I see that a gentleman named Lawrence, residing on the outskirts of Flushing, L. I., has been rushing into print with all sorts of denunciations of automobilists. Colonel Lawrence bewails the danger children and other users of the highways are exposed to by those "arrogant flends," as he terms the automobilists. It makes an awful lot of difference whose ox is gored. This same Colonel Lawrence, I remember well, a few years since kept a number of dogs on his place, and those dogs, too, were "arrogant flends." Despite the fact that the brutes caused a number of runaways through rushing out at passing horses, and in more than one instance actually bit some of the same kind of children whose safety the valiant colonel is now so very solicitous about, I do not recall that the colonel ever paid the slightest attention to the repeated complaints of sufferers from the attacks of the animals. Of course, the difference in danger from Colonel Lawrence's savage dogs and some one else's automobile is painfully evident-to Colonel Lawrence.

Providence declines to take any interest in the man who lights a match to secure the illumination necessary for his determining just how much gasolene there is remaining in the fuel tank of his carriage.

. . .

Despite the newspaper yarn of how a first class motor vehicle can be built by any one for less than \$300, I am of the opinion that the day of the \$4.89 automobile is still in the very distant future. The cost of building and marketing a good motor vehicle is considerably more than most people, including the quid nuncs of the lay press, imagine;

adding to this the present inability of the supply to overtake the demand, the result is that there really is no reason why the price of the vehicle should decline. When standard typewriters are considered and their price taken into consideration, it may be safely predicted that any change in the selling figures of reputable automobiles willnot be one of reduction in the near future. When the typewriter first came out the same gentlemen or may be it was their fatherspredicted that writing machine prices would speedily tumble to a figure where one could afford to have a typewriter in every room of his residence and a dozen at his place of business. Competition was going to do all this, so the predicators declared. The price of the typewriter is to-day virtually where italways was, though the mechanism and producing capacity of it have been greatly simplified and multiplied. The lesson of the typewriter should not be lost upon those who expect to shortly see the price of an automobile so lessened that pedestrianism will become a lost art through every man owning and always using an automobile.

Josh Billings said that success does not consist in never making blunders, but in never making the same one twice. The builder of the perfect automobile will be a man possessed of a similar belief to that of Billings, and who never lost sight of it in his business.

. . . .

The road to hell is credited with being paved with good intentions; it may be, do not know whether it is or is not so paved; what I do know, however, is that the road to dyspepsia-and sufferers from that are unanimous in declaring that it is hell-is bordered, on both sides with "roadhouses." If there is any place on God's green footsfool where a man can get dyspepsia in one time and three motions, it is at a roadhouse, And he won't get it cheaply, either. When the roadhouse proprietor espies the hungry and confiding automobilist drawing nigh to his place he values up the prospective victim by the size of his vehicle and the Frenchiness of its chauffeur; then he passes the word to the alleged cook, the barkeeper and the hanger-on, who says he is a hostler, when heally he is only a hustler, and a mighty poor one at that. Between two of this quartet the guest is poisoned with solids and liquids, and by all of them he is robbed of his money, his health and his enjoyment.

As a possible elimination of this deadly combination comes the welcome rumor of A "roadhouse trust." Usually I am not trustful, something prevents me being an enthusiastic trustee, or, perhaps I should say, trustite, but here's a case where I can be trusted to the very limit. According to the rumor Long Island's Waterbury-timed roads are first to be blessed by this welcome combination. Briefly the scheme is to have trust roadhouses from ten to twenty miles distant from each other on every good road likely to be frequented by automobiles or any other

modern means of locomotion. All of the trust houses are to be painted alike and of a distinguishing color. The places are to be equipped with tanks of gasolene, small machine shops and other like conveniences for the care, repair and replenishing of automobiles. All this reads like the arrival of the prilemnum landws. I don't really believe it will come to pass, myself, though I am teld that the men who are giving the pian considerable thought and favorable consideration, are well able financially and otherwise to carry out the scheme if they decide to do so. I de hope it is all true, but should it be only half so, then F gray it is the money lialf, because you can appomplish something with wealth, while with enthusiasm alonewell, certain it is you cannot build one roadhouse, much less a chain of them with nothing but enthusiasin.

It makes me young again to read that a Western genius has invented an automobile which is equally serviceable upon land and water. At first sight is hardly knew him, but a second look showed me that he was only my old friend of twenty years ago, the land and water cycle, inlarged to automobile size, and turned losse upon an unsuspecting public by his original creator—the space writer.

From the time that Adam was served with a dispossess notice and, racating his former domicile, went forth, we and baggage, to find some other, man be been steadily progressing along the line of facile transportation. In primitive days, if one is to believe Stanley Waterloo's "Ale" man walked, or, if the place he wished to reach was located on a watercourse, he dug from a tree trunk a rude canoe and paddled his way to his destination. There came at time when he cast his eye upon the beasts which surrounded him, and a comparison of the relative strength of the various animals with which he was familiar and his requirements led to the subjugation of the ox and the horse to meet his needs; and from that day to this these animals have continued as his beasts of burden, and have been more or less worshipped by no inconsiderable number of the original driver's descendants.

The man who first constructed a wheeled cart was probably also the man who coined the abused phrase that necessity is the mother of invention. He also discovered that hitching a beast of burden to a cart was as comfortable a method of reaching a given point as even sitting astride of the animal and guiding it to the desired destination. After this progress was rapid, and man has to show for his inventive genius the rallway, electric and cable car, the ocean grayhound, the bicycle, the rubber tired carriage, and, last, the motor vehicle. The sequence of events has thus given birth to the automobile, and neither its life nor its use-fulness can be limited or lessened by any of those who fail to recognize the futility of trying to stop the wheels of progress with the faulty brake of prejudice.

THE COMMENTATOR.





A MOTOR VEHICLE WORTHY of the STUDEBAKER NAME

WE have not been indifferent to the introduction of the horseless carriage. Rather than push upon the market an imperfect and immature product, however, we have expended time and money in order to secure a type of automobile which would not discredit our standing in the vehicle world.

The Studebaker Electric Vehicle

is admirably simple in construction, safe, easy to operate and remarkably free from vibration and noise. It is not a racing machine, but a strongly built practical motor-vehicle for everyday service on country roads and city streets.

Extensive experiments and tests have convinced us that the electric motor, with the great improvements recently made in storage batteries, provides the most desirable equipment in every way. It is simplicity itself, clean, odorless, durable and sufficiently speedy for all practical purposes.

Now on exhibition at the following repositories. Descriptive booklet free.

STUDEBAKER BROS. MFG. CO.

New York City: Broadway and Prince St. Chicago, Ill: 378-388 Wabash Avenue. Kansas City, Mo: 810-814 Walnut St. San Francisco, Cal.: Corner Market and 10th Sts. Local Agencies Everywhere.

DENVER, COLO.: Corner 15th and Blake Sts. SALT LAKE CITY, UTAH: 157-159 State St. PORTLAND, ORE.: 328-334 E. Morrison St. DALLAS, TEX,: 194-196 Commerce St. FACTORY AND EXECUTIVE OFFICE: South Bend, Ind.

"WILLIE K's" TURN

He Wins Third Place in Ardennes Race—Jarrott is First to Finish.

Unmarked by sensational features, the Ardennes Circuit race was run off last week. The winner was Charles Jarrott, an Englishman, who, according to the cable dispatches, drove an unnamed English car, although in the Paris-Vienna race he guided a Panhard. Gabriel, 'n a Mors, was second, and—his hoodoo deserting him for the time being—W. K. Vanderbilt, jr., was third. Jarrott covered 318 miles in 5 hours, 53 minutes, a rate of 57 miles an hour.

The Ardennes form a vast system of hills and forests embracing a part of Belgium, a portion of the Rhine province of Germany and districts in Luxenibourg and France. While the roads generally are very good, the gradients are of all varieties. The district is a favorite excursion ground for cyclists and automobilists.

The course of more than fifty miles, which had to be circled six times, produced a real automobile race, which tested the endurance of cars, tires and drivers. No halts were allowed for refreshments. The slate and granite roads were excellent, and, owing to recent rains, there was little dust, which had been much feared. Bastogne and the neighboring villages were crowded.

In the race Baron de Crawhez was first away, the other entries starting in quick succession. After the first round of fifty miles there occurred a strange scene in Bastogne, machine after machine descending the hill and rushing over the cobbles in the narrow streets with a terrific roar. Covered with dust and mud, the automobiles looked like runaway torpedoes.

M. Gabriel, on a Mors automobile, was nine minutes behind Jarrott, and W. K. Vanderbilt, jr., was third. He also drove a Mors. M. Rigolly was fourth, Count Zborowski, fifth, and Mr. Heath, sixth.

There were many accidents, and it was almost miraculous that nobody was killed.

Baron de Crawhez, while trying to pass M. Coppée, touched his wheel and was thrown out. This accident was very unfortunate, for M. de Crawhez won the Raczynski prize for the first automobile completing the first sixty miles of the race.

M. Jenatsky had a more serious accident, A tire burst, and his automobile was overturned, the driver being caught underneath. His face was badly cut. M. Charron had a collision, and Baron J. De Crawhez ran into a wall, flattening his car.

Motor Fire Wagon Preserred.

The Merion Fire Company, of Ardmore, Pa.; is considering a proposition to purchase a motor fire wagon. It was the original intention to buy a horse drawn wagon, but the advantages of one self-propelled were brought to the attention of the committee, and the selection of the latter is probable.

Will Burn Kerosene Oil.

Hereafter the International Motor Car Co. will accept orders for Toledo steam carriages equipped with kerosene burners. It has been known in the trade that this company has been conducting exhaustive experiments, with the object of perfecting a satisfactory burner of this type, but the announcement comes as a surprise, nevertheless.

The most serious difficulty has been to overcome the noise caused by the rapidly vaporizing oil, and the offensive odor accompanying its combustion. The introduction of a proper vaporizing coil and nozzle has overcome these two difficulties, and the arrangement, as now fitted, is noiseless in operation and good combustion prevents all objectionable odors being emitted.

It has, of course, long been recognized that a satisfactory kerosene burner would solve the remaining difficulties common to steam vehicles, and in particular the disadvantage of large fuel consumption. A theoretical advantage is that of safety, but accidents to steam vehicles seem to be no more frequent than to those of other types, so the principal improvements are due to reduced operating expenses and to the increased facility with which kerosene may be procured.

The feature of economy is an important one. The International Motor Co. state that Toledo steam carriages fitted with the new kerosene burners will travel 100 miles on nine gallons of fuel—30 pounds pressure being ample for perfect combustion. No extra charge will be made for Toledo carriages fitted with kerosene burners.

All are High Priced.

It is remarkable how many \$18,000 automobiles there are scattered around promiscuously, as it were. Last week one of the kind was wrecked by a careless chauffeur, and now on Sunday an accident, although a much less serious one, befell another \$18-000 car. While Robert Allen Lewis, of New York, and a French motorman were on their way to Asbury Park they got caught in a heavy thunderstorm near Colt's Neck. The driver lost control of the machine on the slippery road and it ran into a deep brook running parallel with the road. Both men were dreuched. They sent for help to Freehold, and several men had to come to the scene with heavy tackle before the machine was got back onto the road.

In New Jersey's Capital.

The Automobile Club of Trenton has been organized at Trenton, N. J., and the following officers were elected: President, Karl G. Roebling; vice-president, John S. Broughton; secretary, Edward S. Wood, and treasurer, George Buckman.

The Bronx Automobile Club of the Borough of The Bronx, Greater New York, has been organized with fourteen members and the following officers: President, J. G. Sauer, M. D.; vice-president, A. C. Geyser, M. D., and secretary and treasurer, F. M. Jeffries.

CASH PROFESSIONALIZES

Such is the General Opinion — Wording of Amateur Rule Puzzles Automobilists.

That the amateur line must be drawn in one form or another in automobile racing is generally admitted. Opinions may differ as to whether it is timely to raise the issue now, as was done by the Motor World last week, or as to just how it should be settled, but there is scarcely a dissentent voice raised in controvertion of the dictum that the man who accepts cash is a professional.

There is hardly a doubt that the American Automobile Association will shortly adopt a rule bearing on the subject. It is admitted that this is the only logical thing to do. But beyond this nothing definite can be said. Chairman Scarritt of the A. A. A. is out of town, and, in any event, the matter is not likely to be taken up until the end of the month, when the Long Island meet will be out of the way.

Such tradesmen and others interested in the subject as were to be found this week were approached by the Motor World and asked for an expression of opinion.

"Few gentlemen would care to race for cash," said A. D. Proctor Smith, of Smith & Mabley. "Such an act would make one a professional. The issue as applied to automobile racing is an entirely new one, however, and I am watching the outcome with much interest. It should be handled with a great deal of care."

"Personally, I should hesitate about accepting each for winning a race," said F. A. La Roche, of the American Darracq Co. "At the same time there are many men who do not care for plate or such things, and would take each, and yet consider that they had not professionalized themselves.

"In the opinion of the public, too," he went on, "the word 'amateur' would suggest one who was a much inferior operator and should not be entrusted with a racing machine. There might be no foundation for this belief, but it could still be entertained.

"As a matter of fact, I am inclined to think that it would be a little premature to draw the line at this time. Let chauffeurs enter races simply as chauffeurs. Their being amateurs or professionals would make little or no difference."

Sons of Erin Ride Fast,

It was a Hibernian quartet that distinguished itself last week by driving from Rochester to Buffalo in 2 hours and 5 minutes, an average of 1:48 to the mile—so press dispatches say. The party consisted of Thomas W. Finucane, his son "Jack," Miles O'Rei ly and EJward O'Grady. Out of Batavia the party raced with a New York Central express, and for about three minutes held the iron horse on even terms.





The Long Island Automobile Club is to be commended. It is going to have a lot of races, but it will hold them, not on public highways, but on a private racetrack, where nobody can be hurt save the motormen themselves—absit omen!—and where the contests can be watched with comfort by a multitude of people. That is the sensible thing to do, and if only all other automobilists had adopted such a plan from the outset, much trouble and damage and hard feeling would have been avoided.—(New York Tribune.

If the public could only be brought to understand that the scorching automobilist is as much a bete noir to the legitimate autoist as he is to the public, they would probably sympathize with his efforts to eradicate the fiend and a better all-around feeling be engendered. All the clubs are in line and have expressed themselves as being more than willing to assist in squelching these obnoxious personages. The bicycle men had to suffer from the same source, but time and public opinion have put the unobserver of popular rights out of business.—(Newark (N. J.) Call.

"It will not be long before Long Island people will be obliged to go armed to defend themselves against the crazy and vicious automobilists, who have absolutely no regard for life or limb.

"The daily papers teem with accounts of accidents in which horses are frightened into running away, vehicles smashed, men and women terribly injured and often killed.

"The automobile is developing a new species of fiend, and unless some stringent laws can be passed and enforced one need not be surprised to hear of the shooting or lynching of some of these auto fiends. Seated in their swift, powerful machines, with plenty of money to pay the expenses of any mishap, they plunge over the highways with scant regard for human life.

"Our authorities ought to get right down to business and make a determined effort to control these people. Where there is even a suspicion that one of them is exceeding in the least degree the speed prescribed by law he should be fined the limit. If he cannot be arrested at the point of a revolver, word should be telegraphed to the next station and the man brought back.

"It would pay the village and town authorities to hire special men for the apprehension of these automobile fiends. The fines would

more than pay their salaries, while an effectual check would be put upon their criminal sport,"—(Patchogue (L. I.) Advance.

Until recently the war on reckless drivers of automobiles has been waged by the poor of the cities, by village constables, and in general by those who could never themselves own horseless carriages on account of the expense. While this campaign was largely one of self-defence, a certain amount of class feeling and of animosity against a new and extravagant pastime undoubtedly was responsible for some of the more sensational attacks and captures. The most effectual check upon the abuses of automobiling is, however, likely to come from the wealthy classes, who act in behalf of the horse. The exclusion of automobiles from the Meadow Brook Club at Southampton, the general closing to these machines of great country places which are freely open to carriages, the standing offer of a reward for the prosecution and conviction of fast drivers made by residents of Lenox and Stockbridge-all these things are bound to have their effect in forcing the owners of powerful machines to observe both the law and the courtesy of the road. In fact, some of the present discriminations against the automobile seem to be of a temporary nature, and in the nature of retaliation for the offences of a few.-(New York Evening Post.

The Automobile Club of America, with headquarters in New York, has gone into missionary work, the object of which is to reconcile the horse to the puffing monster that whizzes by him on the road. Albert R. Shattuck, the president of the club, has issued a circular to the members that contains explicit directions for action when a timid horse is encountered, and that also suggests a systematic training of horses to accustom them to automobiles.

There is assuredly much common sense in this advice. The automobile has come to stay, and horse owners, as well as automobilists, ought to recognize that fact. And every effort that is put forth to train horses to have no fear of the new vehicles will just so much lessen the possibility of accident, and just so much safeguard life and property.

Since the introduction of steam railroads it has been the practice to train young horses to have no fear of the trains. Later, when the trolley car began to buzz through city streets and to fly along on country roads, the duties of the horse trainer were more than doubled. Now the automobile introduces a still more troublesome factor. The railroad track may be avoided by the driver of the green horse, or he can place his animal within such distance of it that the beast will not be panic-stricken at the appearance of the locomotive or the trolley car. But there is no way of avoiding the automobile. It is likely to burst into view on any road, no matter how secluded the road may be; and this is where the greatest danger

of runaway accidents comes in. No untrained horse should be expected to take such a thing tranquilly.

It would seem to be, therefore, an even more pressing necessity to train the horse to the automobile than to the locomotive or trolley car. The latter can be avoided, the former cannot. This being the case, President Shattuck's advice is very timely and should be thoughtfully studied by all owners of horses and automobiles.—(Newark (N. J.) Advertiser.

Mr. Alfred G. Vanderbilt has broken the automobile record from Boston to Newport, making the run of seventy-five miles in less than three hours. He expresses confidence that under good conditions he could beat the express train time of two hours.

Of course, Mr. Vanderbilt, being a law-abiding citizen and considerate of the rights of others, must have been careful not to exceed the legal limit of speed at any point in his meteoric career. No doubt a stop-watch anywhere on his course would have failed to catch any higher rate than twenty miles an hour in the country and eight miles in the towns. It is this fact, and not the inherent difficulty of the performance, that reflects so much credit on a total run of seventy-five miles in less than three hours, with a promise of a two-hour trip later.

But the chase after records on the part of automobilists less scrupulous than Mr. Vanderbilt requires some radical action. We cannot have our highways turned into slaughter pens to make a scorcher's holiday. The mere prohibition of excessive speed is not enough, for there is an irresistible temptation to violate it, and it is impracticable to scatter flagmen, furniture vans and justices of the peace over every road in the United States.

What is the solution? Plainly it is a system of separate roads for automobiles.

The Automobile Club's scheme of a steeltrack highway contains the germ of the settlement. When the steel tracks are bu... let them be separated from the ordinary roads and the thing is done.—(New York World.

Motors in the Hot Countries

There is perhaps no hot country which is more suitable on account of its excellent main roads for the use of automobiles than India. But at present it is impossible to ship petrol there, as the government considers it dangerous in such a climate. In Madagascar the climate is just as hot, and, in fact, the average annual temperature on the coast is higher, but the French mails are largely conveyed by gasolene motors, and no accident or explosion has yet been experienced. There are but few heavy oil cars on the British market, and so far they have not had the same success as the petroleum spirit vehicles. It is said that the Rajah of Kolapore and the Rajah of Gwalior are both making inquiries about cars suitable for Indian work, and are seriously considering mechanical traction as a means of developing their respective States.

IN TOURED TO MAINE

From Passaic on a Prescott Steamer—Will Return Over Same Route.

Ardent automobilists are President A. L. Prescott of the Prescott Automobile Co. and his daughter, Miss Prescott. They are spending a portion of the summer at North Newry, Me., having driven there in one of the Prescott steam cars. The distance is over 400 miles, and the return journey will be made in the same manner this month.

The tourists left Passaic, N. J., on July 17, and reached Mendey the same day, making a run of 100 miles. They arrived at Worcester the following evening, 98 miles, having made the run between Springfield and Worcester after 4 p. m., and part of the way in the rain. The distance from Worcester to Boston was covered in less than two hours and a half. Then, leaving Boston at 6 p. m., a run of 51 miles was made to Newburyport, which was reached at 9:20 p. m., a remarkable showing, considering that more than one-half of the road was being repaired and was in anything but good condition.

The next day Biddeford and Portland were reached, and at 8 p. m., the tourists were at North Newry, their destination.

The car arrived at the end of the journey in just as good condition as when it left Passaic, and the only stops made on account of the machine were for taking on gasolene and water. When it is taken into consideration that this car during this trip averaged over 16 miles an hour, over much road that was in a very bad shape, its performance certainly may be said to do it much credit.

Buffalonions Want Better Speed Law.

As a result of the agitation over the speeding of automobiles in Buffalo, N. Y., an ordinance is likely to be passed providing for a more satisfactory adjustment of the matter than obtains at present. To this end Dr. Lee H. Smith, president of the Buffalo Automobile Club, last week sent the following communication to the Board of Aldermen:

"I beg leave to call your attention to Chapter 266 of the Laws of 1902, which authorizes cities or incorporated villages to fix by ordinance the rate of speed at which automobiles or motor vehicles, whether the motive power of the same be electricity, steam, gasolene or other source of energy, may be run or operated within the municipality. At the present time there is no ordinance of the city of Buffalo fixing the speed at which vehicles of this character may be operated upon the public highways, The automobile or motor cycle is a modern vehicle, and is rapidly increasing in popularity within this community, and is in general use.

"It is very proper, therefore, that the Com-

mon Council should take some action in the way of regulating the speed at which these vehicles may be operated. In order to do this it will probably be necessary to revise the entire vehicle ordinance. Under the circumstances I beg to ask that the subject matter of this communication be referred to the Committee on Ordinances of the Board of Aldermen, to give interested parties an opportunity for a hearing."

Brush Patent Again Sustained.

In the United-States Circuit Court, this city, last week, Judge Thomas granted a temporary injunction restraining the International Power Co. and the Manhattan Transit Co. from importing, manufacturing, selling or using any storage batteries made under the Brush patent of 1886, claimed to be owned by the Electric Storage Battery

THIRTY-EIGHT CENTS

ls Maximum Daily Cost for Fuel for This big Delivery Wagon.

For several years the Adams Express Co. has been experimenting with motor delivery wagons, and considerable success has attended its efforts. Experience has always shown that something better could be produced, however, the shortcomings and defects of the vehicle being always brought out by constant use.

About four weeks ago the company finished a new vehicle, which is confidently pronounced by Mechanical Engineer Herschman of the company to be the best by far that has been produced. Since that time it



Co., and especially the "so-called Fulman batteries."

The defendants are required to show cause on August 6 why the injunction should not be made permanent. The order of the court was served upon George W. Hoadley, treasurer of the International Power Co., and F. W. Curtis, secretary of the Manhattan Transit Co.

The Week's Exports.

British Australia—1 case auto vehicles and material, \$21.

China-1 case auto vehicles, \$650.

Dutch East Indies—4 cases motor vehicles, \$2,026.

Genoa-2 cases auto machinery, \$50.

Japan-5 cases auto vehicles, \$1,350.

London-30 cases auto vehicles and parts, \$14.924.

Liverpool—4 cases auto vehicles, \$4,500. Mexico—2 cases auto vehicles, \$1,200. Philippines—1 case auto vehicles, \$807.

has been in constant use at various stations of the company in this city, and its success has been remarkable. To the Motor World man Mr. Herschman stated that it had not given the slightest trouble, nor had it revealed any weakness. It was kept in constant service, doing much more work than a horse team could, and proving superior in every way.

As with the other vehicles experimented with, the present one is run by steam, using coal for fuel. So small is the consumption of this that a day's supply is carried in a very small space, and the vehicle is practically independent of the stable. Its economy is remarkable. The day's running cost never exceeds 38 cents, and frequently falls below that sum. The vehicle weighs nearly three tons, and carries a load of between two and three tons in addition. It is easily handled in the heaviest traffic The Motor World man watched it weave its way in and out in Fourtenth street in a manner that bore out this assertion.

Solar Acetylene Lamps.

Six years of constant and successful effort along the same lines can scarcely do other than to place an article in the front rank. This persistence, and the possession of a number of valuable patented features, goes far to account for the great popularity of the Solar acetylene gas lamps, made by the Badger Brass Co., Kenosha, Wis. The originator of the method of passing water through a wick to the carbide, thus insuring the manufacture of just sufficient gas for the burner to consume, the Badger company continue to use the principle in every Solar gas lamp made.

Recognizing the need for an automobile lamp of great power, strength and beauty, the Solar people have brought out the "Phare Solar," which is patented in the United States and foreign countries.

The following details and illustration will give the reader an idea of the appearance of that lamp, but an adequate idea of the tremendous amount of pure white, powerful light it projects can be had only by riding behind one over pitch dark roads. The Phare Solar is of the famous artillery shape, and is made from extra heavy gauge brass, by skilled workmen, in a complete modern plant built especially for making acetylene gas lamps. All parts are riveted where needed, and particular attention is given to the finish. They have independent generators, with the Solar patent water feed, and one key only controls water supply and turns on and off the gas. Generators can be instantly removed for cleaning and refilling without removing lamp from the irons. All essential parts are made in duplicate, and are removable.

One of the novel features of these lamps is that they will automatically generate enough gas for any size burner the owner may desire, from one-fourth to one foot cubic gas per hour. They are guaranteed to burn stendily and not to jar or blow out under any condition of speed, road or weather.

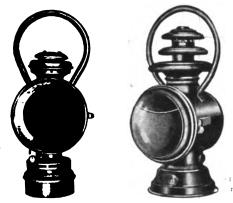
The lamp is made in two sizes, and sells for \$40 and \$30 each in full brass, and \$35 and \$25 in nickel and enamel.

An oil lamp is also being brought out by the Badger company. This is of a very striking design and eminently suited to the artistic tastes of the highest class purchasers of automobiles. It is carefully built from the best quality of spun brass, all parts being riveted where needed, and is capable of withstanding the severest usage to which it is subjected, and made and guaranteed to meet all requirements, being proof against extinguishment by any condition of road or weather.

It is made in pairs, the left hand lamp being fitted with sectional green signal glass in front of lens. The lamp has double convex lens, ground and highly polished (not bent) glass. The lenses are a particular feature of these lamps. Height of lamp is 12 inches, without bail; depth of body, 5 inches; front is 6 inches in diameter.

The lamps are fitted with sockets for automobilists.

standard flat holders, have 1½ inch rear ruby jewels, removable doors, extra large oil capacity, the oil fount being easily removed for refilling. The reflectors are made of the finest quality cold rolled silver on copper, highly polished; are of the cold blast, central draught burning principle, burn kerosene, and are fitted with bails which are



recommended as convenient for hand lantern to inspect machine. Price per pair, in full brass, \$25.

The same style lamp, as above described, will also be supplied without green signal glass, finished in black enamel, with nickel trimmings and fitted with concavo-convex lens, at \$15 per pair.

For small types of automobiles the Solar Baby Oil Lamps will also be offered. These are made in pairs to fit either round or flat



irons, finished in full brass with balls. Price per pair, \$7.50. This same style lamp, fitted with socket on back, and glass front, to be used as a tail lamp, will be supplied in full brass at \$4 each.

Schooling of Horses is Popular.

Members of the Automobile Club of America continue to evince much interest in the schooling of horses. At a meeting of the board of governors last week George F. Chamberlin reported that he had established a training school at Rye. W. E. Buzby stated that he had instituted one at Highland Mills, N. Y. Inquiries for the circular of instruction concerning automobiles and horses that was issued by the club recently are being received from all parts of the country.

It is claimed that Buffalo, N. Y., has 1,000 automobilists.

Claimed Car got Beyond Control.

A peculiar defence was made last week by a Cleveland, Ohio, automobilist who was arrested for violating the speed ordinance of that city. The defendant was L. P. Mooers, whose attorney stated before the hearing began that they expected to show that the machine was out of order and had got beyond the control of the driver. They admitted the violation of the ordinance. The prosecution said they expected to show that the machine was in good order and the violation not accidental.

E. Schryver Reese, of the Cleveland Automobile Club, was called as the first witness. He told how he had met Mr. Mooers on Euclid avenue on the day stated in the charge, coming down the street at a pace "which," said Mr. Reese, "could be denominated by no other word than terrific." He said it was the fastest pace he had ever seen in the city. He turned around and got the number of the machine. It was at his instance that the arrest was made.

Mr. Mooers was placed on the stand and told his story. It was largely technical, including a description of the parts alleged to have been out of order.

Assistant Prosecutor Davis gave Mooers a sharp cross-examination, and he admitted that he had been arrested once before in Chicago for violating the speed ordinance. He also admitted that his employer had cautioned him not to run so rapidly.

Several other witnesses were examined, most of whom seemed to think that Mooers was not strictly responsible for the affair. Judge Kennedy, however, thought the law had been sufficiently violated for the defendant to merit a fine of \$25 and costs, which he administered.

Automobile Gets a Famous Record.

In riding from Land's End to John o' Groat's in 2 days 14 hours 25 minutes J. W. Stocks placed to his credit the best performance yet made for this classic ride. The elapsed time only was figured, including all stops. The best previous time for this end-to-end-of-Great-Britain ride—a distance of a little less than 1,000 miles—was Mills's, 3 days, 5 hours 49 minutes, made on a bicycle. Stocks used a De Dion 8 horsepower car.

Different Initials has This Pennington

"The Racine Boat Manufacturing Company is building three new patent automobiles for H. E. Pennington, one of the best known automobile promoters in the United States and England. They will be put on sale in London," says a press dispatch from Racine, Wis. The name of Pennington is not exactly one to conjure with in the automobile world, as more than one concern has learned to its cost.

An order for 1,000 sets of automobile wheels from one manufacturer is reported to have been received by the Archibald Wheel Co., Lawrence, Mass., last week.



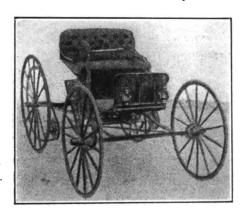
How the Holsman Works.

"The most important universal feature of the modern road vehicle—the result, of two centuries of experience and improvement—is the large, yielding wood wheels, dished and set in at the bottom. It is well known that if the wheels were set perpendicular to the line of the axle, as is necessary in all ordinary chain or gear driven automobiles, they would 'drag' on the road and produce a constant outward strain at the tread, causing hard running and final destruction of the wheels."

Such are the opening statements of a little pamphlet describing and illustrating the Holsman automobile, manufactured by the Holsman Automobile Works, 153 La Salle street, Chicago.

If the vehicle described be taken as the fittest type of motor vehicle, then much of the progress of the last half dozen years must be admitted to be in the wrong direction.

"The real automobile was delayed till the



light wheels and frictionless bearings of the bicycle seemed to offer a solution of the problem." the pamphlet continues. "But the bicycle-like automobile, with its unyielding, rollerlike perpendicular wheels, puncturable tires and proportionally heavy power and transmission machinery, has been found unsuitable for wagon roads, and the public is still waiting for a practical application of motor power to a vehicle that is as durable, flexible and easy running as the best horse drawn vehicle.

"The Holsman transmission device consists of the ordinary vehicle brake beam or shaft suspended on hangers by roller bearings and revolved in a forward direction by a simple chain connection to the motor shaft. This brake shaft is provided with two deep grooved pulleys at each end, the larger one engaging by a flexible rope or band with a corresponding pulley attached to the spokes of both rear wheels to turn them forward; the smaller one a friction pulley adapted to engage the tire of the rear wheels to reverse them.

"The shaft is connected to a ratchet brake lever in easy reach of the driver, so that by setting the lever back the bands are tightened in the revolving grooved pulleys and the vehicle starts forward, and by setting the lever forward the bands are loosened and the vehicle is disengaged, positively and without chance of error (as may happen with a sticking clutch), and at the same time and by the same motion the brake is set when, by releasing a catch and setting the lever further forward, the brake is released and the friction pulleys are at once, positively and without chance of error, applied to the wheels, causing them to reverse.

"Thus all movements of starting, stopping and reversing are easily performed with one operation of a backward and forward motion of the simplest appliance known to vehicle construction, namely, a lever."

In other respects the design follows the convention. A double cylinder gasolene motor of the opposed type is employed.

Broughams Find Ready Buyers.

Extension and straight front broughams are the subject of a little pamphlet which the Electric Vehicle Co. has just issued. These new vehicles are claimed to be the most substantial and luxurious automobiles ever made, and they embody the best results of seven years' manufacturing experience, and, further, are the outcome of four years' special investigation into the particular requirements of users of carriages of the brougham class.

During the last few weeks orders have been received for upward of twenty of these luxurious vehicles, the purchasers including people prominent in wealth and social position in New York, Philadelphia and Newport.

Recent Incorporations.

Newark, N. J.—Brandenburgh Wagon Works, with \$5,000 capital; to manufacture automobiles. Corporators—W. L. Glorieux, G. F. Brandenburgh, C. W. Pfeil, Henry Berefeld and B. F. Jones.

Portland, Me.—Climax Electric Storage Battery and Vehicle Co., with \$500,000 capital; to make and deal in automobiles and steam carriages and appliances thereof. The officers are William Bowler, Waltham, Mass., president, and John Oldfield, Boston, Mass., treasurer.

Oswego, N. Y.—The Kitts Semi-Flask Boller Co., with \$7,000 capital; to manufacture boilers for creating power and parts pertaining to them. The following officers were elected: President, Willard A. Kitts, sr.; vice-president, William L. Moore, and secretary and treasurer, W. H. Baker.

St. Louis, Mo.—Automobile Renting Co. of St. Louis, with \$2,000 capital. Corporators— Harry S. Turner, jr., Max R. Orthwein, Ralph H. Orthwein, H. M. Caudrey, George A. Meyer and Henry Koehler, jr.

Pumps Gasolene to the Tank.

A Berlin firm dealing largely in gasolene has brought out a device for pumping that volatile fluid direct to the tank of the motor vehicle. A pump much like a beer pump is used. Not only does this do away with the waste of gasolene through spilling, but the danger of accident arising from fire is rendered almost nil.

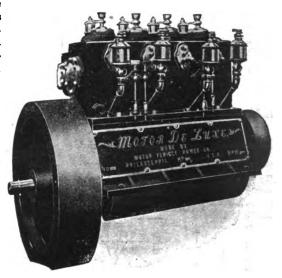
Model De Luxe Features.

In placing on the market their "Motor de Luxe the Motor Vehicle Power Co., Philadelphia, lay the greatest possible stress on those two essentials of a thoroughly good motor—reliability and simplicity.

By adopting every improvement of value, the makers have been able to simplify, and at the same time increase, the efficiency of their engines, which are all of the four-cycle type, and for that reason are economical and reliable, and cannot be surpassed for automobile use.

The four-cylinder Motor de Luxe gives 8 horsepower on the brake. It is finished in bicycle enamel, and all parts, where possible, are polished brass, making both an attractive and neat appearing machine.

Each cylinder is provided with a sight feed oil cup, the cranks and connecting rods being oiled by splash and drip; the base, or housing, being oil tight, thus preventing the



splashing oil from being thrown over the engine and floor of the boat.

The two half speed shafts—one for working the exhaust and the other the igniter shaft—are made from cast iron, and are cut gears; the pinion, or main gear on the crank shaft being a brass sided, cut rawhide gear, consequently there is an absence of noise and no oil is necessary. This is inclosed in a neat gear case.

The water circulation is forced by a plunger pump operated by an eccentric, the water jackets being especially large, and as the exhaust trunk is thoroughly water jacketed, there are no hot parts to burn the hands or scorch the clothing.

An efficient and perfect muffler is used, which operates with absolutely no back pressure.

The vaporizer, when set, need never be altered, and as the fuel is fed by gravity from the tank, the danger of leakage is reduced to a minimum.

Automobiles of French make form a part of the exhibits at the International Exhibition of Sports, which was held at St. Petersburg, Russia, last month.



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THE BEST THING ON WHEELS.

The ideal Automobile for business and for pleasure, combining strength and practical merit with mobility in control, economy in operation and lasting wearing quality—Starts and stops at will and travels all roads with equal safety—in a class by itself—an everlasting runner.

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Price, \$650.00. F. O. B. Detroit.

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La.
C. H. Johnsen, 55 S. Porsyth, St., Atlanta, Gs
Sutcliffe & Co., 411 Main St., Louisville, Ky.
Brown-Thompson & Co., Hartford, Conn.
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Adams & Hart, Grand Rapids, Pilch.
Kline Cycle & Auto. Co., Harrisburg, Pa.

Olds Motor Works, Detroit, Mich., U.S.A.

Notwithstanding the long distance, and above all the great difficulties of bad mountain roads in Switzerland and Austria,

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Vehicles have figured brilliantly in the

Taking FIRST PLACES and establishing records as they usually do:

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18 h., 54 m., 50 s.

But most noteworthy is the fact that in the General Classification the Light

Vehicles are 3d and 5th, beating

20-Heavy Racing Machines-20

Proving not only that the DARRACQS are the fastest, but are also superior to the MASTODON RACERS in Endurance, Reliability and Regularity. IMMEDIATE DELIVERY.

AMERICAN DARRACQ AUTO. CO., 652 Hudson Street, New York F. A. LaROCHE, General Sales Manager.

Graded Speeds are Suggested.

Replete with common sense is the suggestion of Ellicott Evans, a Buffalo (N. Y.) automobilist, relative to the fixing of reasonable rates of speed in that city.

"I think the ordinances of the city should be changed," he said. "The city should be laid out in circles, as we often see on a map, to show the miles and half miles. Eight miles is too slow for automobilists in all parts of the city.

"Let it be eight miles downtown, especially in the business streets, where there is considerable travel. Here's my plan: Have the first circle reach north to North street, and within that circle, with the centre of the city as the pivot, make the rate of speed eight miles an hour. Then have another circle just beyond that, extending to Ferry street on the north, and make the speed twelve miles an hour. The next circle can extend to the city limits, and within it let the speed be fifteen miles an hour."

Another Dust Wrinkle.

Probably no little portion of the dislike which so many people have for motors is due to the dust which the cars leave behind them. Much of this annoyance can be spared to non-motoring users of the road if the pace is reduced by the driver of the car as he passes or overtakes traffic, but it is often difficult to do this, as it is better in many cases to cut down the period of overtaking and passing to the lowest limit. Unless the speed is reduced to something below eight miles an hour the dust is not much lessened, and at that speed the horse carriage one is about to pass is not left behind for a long fime, and most horse drivers do not like this; they would rather have a few moments' extra dust.

Will Make Artillery Wheels.

It is the intention of the I. A. Weston Co., Syracuse, N. Y., to place on the market in the near future wood spoked automobile wheels with artillery hubs, which will interchange with the equipment now used by them in their wire wheel construction. These wheels will be built for both light and heavy vehicles, and all material used in their construction will be of the highest grade procurable.

Manufacturers contemplating the use of such goods should correspond with them. The Weston high grade wire wheels, steering devices, etc., can be had promptly. A new catalogue is now being completed which can be had for the asking.

Some De Dion Changes.

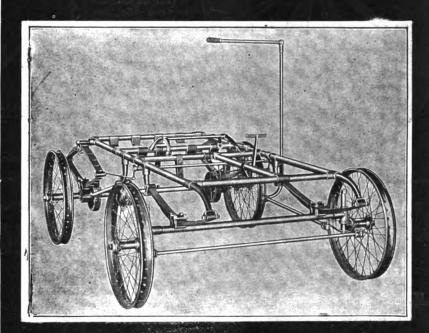
Several changes have lately been made in the De Dion 8 horsepower water cooled motor. The stroke of the piston has been increased from 110 mm. to 120 mm., the diameter of the cylinder being, as hitherto, 100 mm. A heavier flywheel has been adopted, the exhaust outlet has been remotor, while the water circulating pump is now driven off the half speed shaft of the engine.

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There are no weak spots in these gears.

Don't confound them with gears which have been hastily constructed to meet an early demand from automobile makers.



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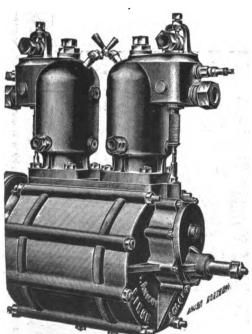
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1¾ h.p. Air Cooled· 2¼ h.p. Air Cooled. 5 h.p. Single Water Cooled.

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9 h.p. Double Water Cooled.

11 h.p. Double Water Cooled.

On the market abroad for five years with a fine record.

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The Week's Patents.

705,402. Motor Car. William C. Holloway. Westminster, England. Filed April 18, 1902. Serial No. 103,605. (No model.)

Claim.—1. A motor car having a lower body part with a recess or recesses and an upper part which is composed of portions adapted to be folded flat upon each other, and as thus folded to be lowered into such recess or recesses, substantially as described.

2. A motor car having a lower body part with a recess or recesses and an upper part consisting of roof and wall portions connected together and adapted to be folded flat upon each other and as thus folded to be lowered in such recess or recesses, substantially as described.

705,533. Steam Generator. Charles A. Kitts, Oswego, N. Y.; Harriet W. Kitts, administratrix of Charles A. Kitts, deceased, assignor to Steam Carriage Boiler Company, Oswego. N. Y., a corporation of New-York. Filed March 9, 1901. Renewed April 3, 1902. Serial No. 101,233. (No model.)

Claim.—1. A steam generator comprising a water-containing shell having inclined side walls, and a series of water tubes projecting from said side walls at substantially right angles thereto, and having their outer ends extended substantially equal distances from the centre of the shell and closed.

2. A steam generator consisting of a tapering water-containing shell having a series of water tubes arranged in rows one above the other and inclining outwardly and downwardly therefrom, the tubes of each row being gradually reduced in length from the bottom row upwardly.

705,588. Compensating Gearing. Edward Huber, Marion, Ohio. Filed Jan. 13, 1902. Serial No. 89,391. (No model.)

Claim.—1. The combination, in a compensating gear, of a loosely mounted main driving gear wheel, a relatively large gear wheel adapted to be operatively connected with one driving wheel, a relatively small gear wheel adapted to be operatively connected with the other driving wheel, a relatively large pinion carried by the main driving gear wheel and meshing with the larger gear wheel, a relatively sinall pinion also carried by the main driving gear wheel, meshing with the smaller gear wheel, and bearing the same proportion thereto as does the larger pinion to the gear wheel with which it meshes, and a third pinion meshing with the smaller pinion and united with the larger pinion to rotate in unison therewith, substantially as described.

705.603. Reversing Machanism. Stefanus Nielsen, Brooklyn, N. Y. Filed Feb. 14, 1902. Serial No. 94,006. (No model.)

Claim.—1. In a reversing mechanism, the combination of a driving wheel as rotating constantly in one direction, a friction clutch as normally in engagement therewith and driven thereby, a friction wheel as also constantly driven with the first mentioned wheel, a friction wheel as adapted to be driven always with the friction clutch, a friction wheel as normally disengaged from the wheel, but adapted to be driven with the wheel and normally disengaged from the wheel, but adapted to drive the same and the clutch, and means for disengaging the clutch from the wheel and causing engagement between the wheels.

705,616. Galvanic Battery. Charles B. Schoenmehl, Waterbury, Conn. Filed Dec. 1, 1900. Serial No. 38,286. (No model.)

Claim.—1. In a battery of the class described, the combination with a jar, of per-

forated sheet metal tubes located therein to form a receptacle for a depolarizer, an expansible wire interior of said part or parts adapted to force them outward and retain them rigidly against the jar, a zinc located interior of said depolarizer and means for the attachment of a wire to each of said elements, substantially as shown and described.

705,630. Separator for Electric Accumulator Plates. Richard Alexander-Katz, Berlin, Germany. Filed Oct. 18, 1901. Serial No. 79,185. (No model.)

Claim.—1. A non-conducting separator for electric accumulator plates comprising in combination two wide meshed gratings, whereof the intersections of the one cross the open spaces of the other, the outer edges of said gratings all being in the same place.

705,671. Differential Gear for Self-Propelling Vehicles. Arthur Herschmann, New York, N. Y. Filed June 21, 1901. Serial No. 65,387. (No model.)

Claim.—1. In a vehicle, the combination of a shaft in two parts, two traction wheels driven respectively by the said parts, a compensating gear interposed between the parts, means for locking the parts of the compensating gear together to thereby destroy its compensating function and means for controlling said locking means from a distance.

705,768. Wheel Tire. Hyman Lieberthal, Chicago, Ill. Filed May 5, 1902. Serial No. 105,964. (No model.)

Claim.—1. In a wheel tire, the combination with a flexible tube, of two series of yielding braces in said tube, each series being located at one side of the longitudinal centre of the tube, and a spring for each brace intermediate of its ends, substantially as specified.

705,790. Two Speed and Differential Gear for Motor Vehicles. John C. Robbins, Waltham, Mass. Filed Oct. 31, 1900. Serial No. 35,031. (No model.)

Claim.—1. In a motor vehicle, means for varying the speed of the vehicle from fast with relatively low power, to slow with increased power, without varying the speed of the motor or power developed by the same, comprising a motor driven shaft, a gear fast thereto, a gear loose on the same shaft and driven at a different speed by the first said gear through a speed changing train of gears, a sprocket placed between said gears also loose on said drive shaft, a clutch member formed on each side of said sprocket, corresponding clutch members on the driving gears adapted to engage positively with the clutch members on the sprocket, and means for moving said sprocket laterally on the shaft to cause one of its clutch members to engage with the corresponding clutch member of either driving gear, substantially as described.

705,824. Automobile. Samuel T. Davis, jr., Ardsley-on-Hudson, N. Y., assignor to the "Locomobile" Company of America, New York, N. Y., a corporation of West Virginia, Filed Feb. 8, 1902. Serial No. 93,162. (No model.)

Claim.—1. A steam motor vehicle provided with longitudinal side seats having a steam engine and steam generator, the latter being provided with a plurality of draught flues extending outwardly and then rearwardly to such a distance as to leave between said rearwardly extended flues and between said longitudinal side seats an available and useful space.

705.863. Bearing. Henry H. Porter, Dowagiac, Mich. Filed Jan. 5, 1900. Serial No. 506. (No model.)

Claim.—1. In a bearing for vehicles, the

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combination of the axle with a suitable collar having a flange; a hub or boxing; a dust and water band combined with a ring to fit within the hub, the said dust and water band having an outwardly projecting Vshaped portion fitting into the flange of the axle, for the purpose specified.

2. In a bearing for vehicles, the combination of the axle with a suitable collar having a flange; a hub or boxing; a dust and water excluder consisting of a band and an outwardly projecting V-shaped portion carried by said hub or boxing and fitting within the flange of the axle, for the purpose specified.

705.881. Gas Engine Ignition Regulator. Michael J. Sullivan, Springfield, Ohio. Filed Jan. 13, 1902. Serial No. 89,410. (No model.)

Claim.-1. In an apparatus of the character described, a circuit making device comprising a rotating part driven by the engine and provided with a contact arm, a segment bar lying in the plane of rotation of said arm, its centre of curvature being the centre of rotation of said arm, and a head provided with a contact block and adjustable longitudinally on said bar, substantially as described.

705.892. Steering Mechanism. Frederick E. Allen, Boston, and Raymond H. Danforth, Salem, Mass., assignors to the Improvements Manufacturing Company, Boston, Mass., a corporation of Maine. Filed Dec. 17, 1900. Serial No. 40,068. (No model.)

Claim.—1. In a steering mechanism, the combination of a guiding or steering member, a rotary cam having one or more complete turns or convolutions of a coiled or non-returning groove of uniform width, a movable cam engaging member connected with said guiding member and having a sin-gle circular stud closely fitting said groove at all points in the operating length thereof and movable in a path which remains substantially normal to the groove through one or more complete rotations of the cam whereby the cam engaging member is locked against movement when the cam is stationary, and means to rotate the same, and thereby impart a steering movement to the cam engaging member.

705,919. Electric Battery. Edwin R. Gill, New York, N. Y. Filed Nov. 15, 1901. Serial No. 82,478. (No model.)

Claim.—1. As an article of manufacture, a battery cell having an exterior screw threaded electrode.

2. As an article of manufacture, a battery cell having a screw threaded top in electrical connection with one electrode of said cell.

3 A screw threaded socket, and a contact spring therein; in combination with a battery cell having threads adapted to screw into said socket.

4. A socket and two terminal pieces attached thereto, in combination with a bat-tery cell fitting said socket and having electrodes adapted to make contact with said socket terminals respectively and means for securing said cell in said socket.

705,995. Carburetter for Explosive Engines. George A. Graves, Joplin, Mo., assignor of two-thirds to Thomas W. Cunningham and Alfred Reynolds, Joplin, Mo. Filed Oct. 15, 1901. Serial No. 78,689. (No model.)

Claim.-1. In a carburetter, the combination with a chamber constructed to be connected to an engine and having air and gasolene connections, of a gasolene cup mounted in said chamber, a valve bearing a vaporizer located to normaly dip into said cup and to be lifted out of said cup when said valve is unseated, substantially as described.

705,996. Sparker for Explosiive Engines. George A. Graves, Joplin, Mo., assignor of two-thirds to Alfred Reynolds and Thomas W. Cunningham, Joplin, Mo. Filed Oct. 15, 1901. Serial No. 78,690. (No model.)

Claim.-1. In a sparker, the combination with a fixed electrode, of a shaft bearing an electrode located to be brought into engagement with said fixed electrode, a lever pivoted on said shaft, a pair of springs connected to said lever and each mounted to exert a component force on the lever at right angles to the force of the other, and means for intermittently engaging and releasing said lever to make and break a circuit through said electrode to make a spark, substantially as described,

DESIGNS.

35,984. Autocarette Body. William E. Schneider, Washington, D. C. Filed April 11, 1902. Serial No. 102,485. Term of patent fourteen years.

Claim.—The ornamental design for an autocarette body, substantially as shown and described.

TRADEMARKS.

38,700. Pneumatic Tires for Bicycles, Carriages and Automobiles. Fisk Rubber Company. Chicopee Falls and Springfield, Mass. Filed June 30, 1902.

The word "Premier." Used since November 22, 1900.

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A Pullman Sleeping Car of latest construction is now attached to New York Central train leaving Grand Central Station at 4:00 p. m., daily, running through over the Michigan Central Station, arriving at Grand Rapids at 12:55 p. m., pext day, connecting in Union Station for all points in Western Michigan. For information and sleeping car reservations inquire of New York Central Agents.

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STEAM AIR AND STEAM WATER PUMPS, Both operated from the seat.

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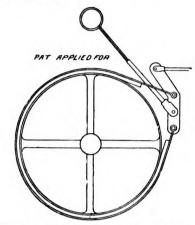
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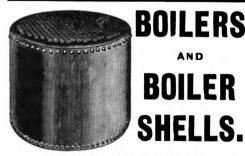


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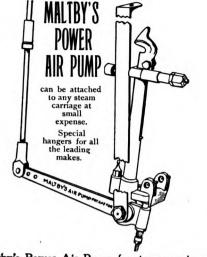
to supply the demands of the trade.

We are also the Western agents for Locke Regulator Co.;

Janney, Steinmetz & Co.; Brown-Lipe Gear Co., and other well known eastern concerns, and car y a full stock of burners, generator regulators, differentials and a full line of brass goods, such as valves, etc.

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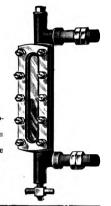
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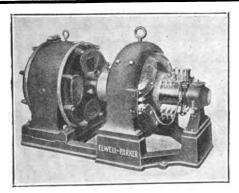
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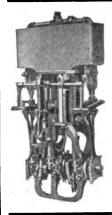


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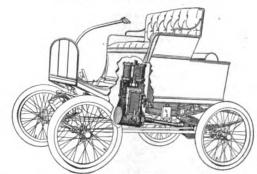
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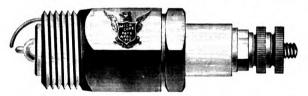
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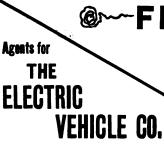
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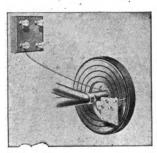


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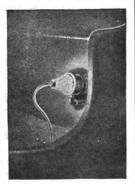
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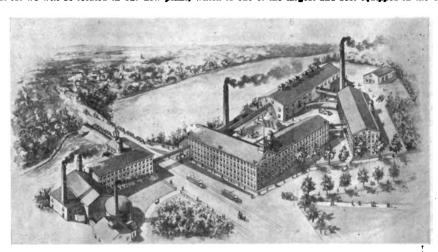
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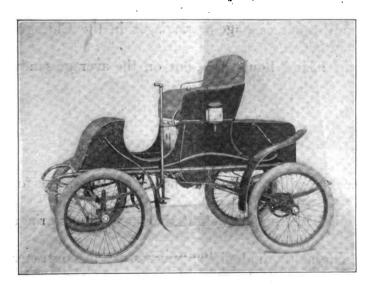
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NEW electric vehicle showing radical departures in many essential features. The battery consists of 24 cells, carried in the rear of the body compartment. The motor is rigidly suspended from the frame of the gear, just in front of the battery. The battery will give a run of 40 miles on one charge, and can be recharged from any 110 volts direct current lighting circuit. In the severe test made during the last year, no breaks have occurred in running gear. It is a vehicle made for every-day use on country roads or city streets.

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THE BEST STEAM CARRIAGE BUILT,

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It contains the simplest, most practical and best constructed motor manufactured or sold in America.

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Have You Compared

the elapsed time of the three RAMBLERS with any other carriage or carriages in the Chicago-Waukegan 100-mile Endurance Contest?

Held not on Connecticut macadam, nor on Long Island Boulevards, but on the average sandy roads of Illinois, it was demonstrated that the



Hydro-Carbon Motor Carriage can successfully compete with the \$2,000 and \$2,500 carriages for speed and service on any kind of road.

That the RAMBLER has a less fuel consumption per pound weight than any other carriage entered in the contest.

That the RAMBLER system of cooling the engine is undeniably successful; it consumes absolutely no power, and requires less water than any other applied system.

That the RAMBLER stands alone; no other carriage of its type and price is in its class.

If you would know more of the RAMBLER, send for catalogue M-W-free on request.

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THE PIERCE MOTORETTE, EQUIPPED WITH G & J DETACHABLE TIRES, OPERATED BY MR. PERCY P. PIERCE, MADE THE BEST RECORD IN THE CHICAGO 100-MILE NON-STOP CONTEST, AUGUST 2, 1902, WINNING THE SILVER CUP.

"Mr. Pierce drove all the way from Buffalo to Chicago for the contest. The carriage used by Mr. Pierce was the smallest in the race, a narrow-gauge motorette of 3½ horse power. Mr. Pierce has been using it continuously since April 26, when he won a first-class certificate at Long Island. He won another at New York on Decoration Day, and with his victory Saturday becomes the only automobilist to possess blue ribbon certificates from all the endurance contests in the country.

"First place in the gasolene consumption contest was also taken by Mr. Pierce's machine. He made the run using only three gallons and one quart of gasolene, while the average amount was six gallons and one quart."

The extraordinary resiliency of the G & J Tires gives the greatest speed and the greatest mileage for power consumed.

G&JIRE Co.

INDIANAPOLIS,

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, August 14, 1902.

No. 20

LOCK THEM UP

Each Night of Boston Run Cars Will be Thus Secured—Entrance Fee \$50.

Work on the rules for the Reliability Run of the Automobile Club of America is being vigorously prosecuted, and they will be ready for the printer within a few days.

The entrance fee will probably be the same as it was last year, viz., \$50 for each car. The expenses will be much heavier than they were in 1901, the maintenance of the observers while on the run being a big item. The observers will be volunteers, of course, but their meals, lodging, etc., will be paid for by the club.

It has been definitely decided to frame and rigidly adhere to strict rules in regard to repairs at the night controls. As each car arrives at the latter it will be taken in charge by the officials, and the operator will be required to fill the gasolene and water tanks, this being done to avoid confusion in the morning. The car will then be tken to the garage and locked up. No repairs of any kind will be permitted to be made at this time. The next morning at 7 o'clock the car will be turned over to its operator, who will be given until 9 o'clock to give it any attention he may desire. At 9 o'clock he is expected to be ready to start; if he is not, any further time taken for repairs will be charged against him.

It is also the intention of the committee to pay especial attention to the tires. Contestants will be required to state on their entry blanks the make, size and weight of their tires, the retail price of the car, and other information. Then the observers will be looked to to keep a record of the tire troubles and happenings.

Chairman Scarritt, who is giving this matter his especial attention, stated to the Motor World man that about 50 per cent of automobile troubles were traceable to the tires. Therefore, he continued, the plan outlined would, in spite of its entailing considerable labor, yield commensurate results.

labor, yield commensurate results.

No changes in the route already given, via
New Haven and Springfield, going and returning, or the dates—October 9 to 15—would
be made, Mr. Scarritt said.

Arranges for English Show.

On Tuesday the regular monthly meeting of the executive committee of the National Association of Automobile Manufacturers was held at the offices in this city. The resignation of Secretary E. P. Wells, Keene, N. H., which had been tendered some little time before, was accepted, and F. M. Lande, New York, elected in his stead.

The standard form of warranty which the committee had been at work on was formal-ly approved. Under its terms all goods are warranted for sixty days from the date of sale

Assistant Secretary Unwin stated that a second letter, more fully explaining the details of the plan for the exhibition of American automobiles at the London show next fall, was being prepared. A very advantageous arrangement had been made. Under it a manufacturer could send a car of about 1,000 pounds weight to the show for \$72.50, this charge covering every item of expense from the time it left the factory until it returned.

A hall in the building had been set apart by the management for the exhibition of American goods. It is large enough to show fifty cars.

Baker Car Will Race Again.

The famous Baker "torpedo" will be seen again this season, probably at several of the forthcoming race meets. It is rapidly being put in shape for service for this purpose.

"We are making a special track equipment for this car, aiad while we shall not participate in the Brighton Beach event of the 23d of the present month, the Baker races will doubtless appear in several events in September," writes Secretary Goss of the Baker Co. to the Motor World. "We still hope for an opportunity of demonstrating the superior construction of this vehicle and its wonderful speed upon a safe, straightaway course."

Reber Will Have a Tonneau.

The Reber Mfg. Co., Reading, Pa.—in which the guiding spirit is the well known James C. Reber—will shortly place on the market a 12 horsepower tonneau gasolene car, weighing about 1,200 pounds. They have discontinued work on the delivery wagon they were experimenting with.

EIGHT AND FIFTEEN

Miles per Hour are Speeds Permitted Buffalo Automobilists—Victory Follows Check.

With an ease that was remarkable, and with only a slight check, Buffalo, N. Y., automobilists have been instrumental in having passed an automobile speed ordinance that is, in the main, satisfactory.

The ordinance provides, in brief, as follows:

All vehicles, whether carriages, automobiles, auto-cycles or bicycles, are restricted to a speed of eight miles an hour within the district bounded by Porter avenue, North and Best streets on the north, Fillmore avenue and Smith street on the east, and the waterfront on the south and west.

Outside of this limit a speed of not more than fifteen miles an hour may be maintained.

As was stated last week, President Smith corners the speed must be reduced to five miles an hour.

As we stated last week, President Smith of the Buffalo Automobile Club submitted to the city lawmakers a measure which had been drafted by a committee of automobilists. This went through the Board of Aldermen with surprising facility, not a dissenting voice being heard. In the Board of Councilmen, however, an objection was raised, and the whole matter was laid over. On Saturday, however, it was taken up again and passed.

Cleveland's Race Meet.

Practically everything has been arranged in regard to the Cleveland, Ohio, race meet, excepting the date. That will be decided upon at a meeting of the Cleveland Automobile Club, to be held to-day. The programme will consist of eight events, which will be run off on the famous Glenville track, on which Maud S. made her great record.

No order has yet been placed for 'buses for the Rhinecliff-Rhinebeck automobile line. In fact, the line has been given up for the present.

WILL NOT DOWN

Logic of Events Requires an Amateur Rule— Opinions in Its Favor.

In some quarters the statement that the American Automobile Association, the body governing automobile racing in this country, was preparing to frame an amateur rule has been received with distaste.

It has been said that it was best to let sleeping dogs lie; that an amateur rule was not needed; that the plan of accepting cash, if wanted, was one that could not be improved upon. Some of the hurt ones have even gone so far as to say that if the A. A. A. | does its duty in the matter its authority will be flouted, its dictum disobeyed. "Let the A. A. A. mind its own business," these unnamed and unknown critics have cried.

Nevertheless, it is an assumption warranthed by the facts that the A. A. A. will take the action outlined by the Motor World two weeks ago. The formulation of an amateur rule is even now being seriously considered, and in all probability will be adopted within a few weks.

"We still hold to this idea," said President Scarritt yesterday in reply to the Motor World man's inquiry. "Meanwhile, we are seeking to obtain all the light possible on the subject. So far as developed, there seems to be a difference of opinion, some of those interested holding that the matter should be left to individuals to decide as they see fit. But we shall take action soon now."

The Motor World's canvass of those interested has so far brought forth one-sided replies. Three questions were submitted to a number of gentlement prominent in club and trade circles, as follows:

- 1. Shall the acpetance of cash as a prize in an automobile race make the operator of an automobile a professional?
- 2. Shall amateurs and professionals be allowed to compete in the same events?
- 3. Shall a person who is hired to operate and take care of an automobile be adjudged a professional?

To these questions H. M. Wells, of the Prescott Automobile Mfg. Co., replies:

"In answer to your first question I will say that in my opinion automobile clubs that promote racing should not offer cash prizes. I consider that a medal or a certificate is much more valuable to the owner of an automobile than a cash prize, and the owners of automobiles who are not satisfied with medals or certificates as prizes are certainly going into racing for what money they can get out of it, and they should be classed with other professionals who race for cash prizes.

"In regard to your second question, I do not see any serious objection to allowing amateurs and professionals to compete in the same events, so long as they do not race for cash prizes. Many of the amateur driv-

ers to-day are more expert in handling a motor vehicle than the professionals.

"In answer to your third question I should consider that a person who makes his living by operating and taking care of an automobile for a private owner is a professional.

"I do not thinb that the ordinary employes, who are classed as demonstrators by automobile manufacturers, should be considered professionals, as they are liable to be transferred from carriage operating to any other part of a manufacturing plant at the will of the superintendent or foreman who has charge of them, and should be regarded simply in the light of a mechanic, as in any other manufacturing industry.

"I thinb that if we wish to eliminate professionalism from automobile racing the question of cash prizes should be done away with entirely and the race promoters only allowed to give a medal or certificate, and if the American Automobile Association will adopt this rule I think it will do away entirely with the discussion in regard to professional and amateur classes."

Both Walter C. Baker of the Baker Motor Vehicle Co., and H. C. Cryder, of the Automobile Co. of America, agree in their answers. "To the first I would say yes; to the second yes, and to the third yes," writes Mr. Baker. Mr. Cryder's answers are identical in very respect.

Went Behind the Returns.

As a result of its recent 100-mile endurance run a controversy has been raging in the Kansas City Automobile Club, which has resulted in the disqualification of Percy Pierce, a blue ribbon winner. The trouble all arose from the alleged failure of one of the official observers to make a proper report. The observer reported a stop as having been made to placate a frightened horse, and, therefore, unpenalized. It was asserted, however, that while stopped Pierce got out of the vehicle with a monkey wrench in his hand and made some repairs. Hence the disqualification referred to.

Thirty Years Hence, He Says.

Grown more cautious, Thomas A. Edison selects a date far in the future for the realization of his predictions. Writing to the official organ of the Press Exhibition, which was opened at Copenhagen on June 14, he says:

"I believe that within thirty years nearly all railways will discard steam locomotives and adopt electric motors, and that the electric automobile will displace the horse almost entirely."

CONSUMPTION TEST

Committee Submits Figures Based on May 30th Run-100 Mile Pound.

Although somewhat belated, the official report of the committee having in charge the 100 mile non-stop run of the Automobile Club of America, held on May 30, possesses interest because of the tables relating to the consumption test which accompany it. The record of the competing vehicles, aside from the figures referred to, have already been published and need not be repeated.

The gasolene and water consumption has been figured in proportion to weight of cars which made the 100 miles without a penalized stop.

The "100 mile-pound" is taken as the unit of comparison for both gasolene and water consumption. The decimal part of a gallon of gasolene required to carry one pound 100 miles is arrived at by dividing the amount of gasolene consumed in the 100 miles by the weight of the car (including passengers at 150 pounds each), thus:

Four gallons of gasolene consumed, divided by 1,130 lbs. (weight of car), equals .0055 gallons per 100 mile-pound.

Five gallons of gasolene consumed, divided by 1,700 lbs. weight (weight of car), equals .0029 gallons per 100 mile-pound.

The water consumption of steam vehicles is arrived at in the same manner, thus:

79.5 gallons of water consumed, divided by 1,650 lbs. (weight of car), equals .0481 gallons per 100 mile-pound.

Six gallons of water consumed, divided by 1.750 lbs. (weight of car), equals .0034 gallons per 100 mile-pound.

GASOLENE VEHICLES.

Amount of

Weight, Amount of gr	asolene
	er 100
passengers, consumed, n No. Description, pounds, gallons, g	
	allons.
A-12 Pierce Motorette1,130 4	.0035
A-23 U. S. Long Dis-	
tance	.0025
A-27 A. Darracq & Cie. 1,560 5	.0032
A-28 A. Darracq & Cie. 1,750 41/8	.0023
A-32 Packard3,020 61/8	.0020
A-33 Mors	.0024
A-38 Georges-Richard 2,000 8	.0040
A-39 Georges-Richard 2,000 7	.0035
Λ-43 Autocar1,500 5	.0033
A-50 De Dion-Bouton1,225 6	.0048
A-52 Searchmont2,450 7	.0028
A-53 Searchmont2,430 834	.0036
A-56 Haynes-Apperson1,700 5	.0029
A-58 Knox	.0042
A-59 Knox	.0035
A-60 Knox	.0041
A-73 Searchmont2,350 81/2	.0036

STEAM VEHICLES.

B- 6 B- 7 B-22 B-29 B-30 *B-64	Description. Grout Bros	1,700 1,650 2,100 1,925 1,620 1,750	Amount gasonlene consumed gallons. 12% 13¼ 14 15% 10 61½ 5% 24	Amount gasolene per 100 mile-1b gallons	Amount water consumed gallons. 113.15 85.5 79.5 93.25 114.75 89.25 6. 6. 6. 9.75	Amount water per 100 mile-15 gallons, .0870 .0502 .0481 .0444 .0596 .0550 .0034 .0034
*B-66	White	4 = 4 4	9	.0051	9.75	.0055
B67	Overman		101/2	,0061	84.75	.0498
	Locomobile		16	.0089	103.5	.0581
*Class	s B—Section 2—under st	rictly non-sto	p rules.			

TOLEDO GASOLENE CAR

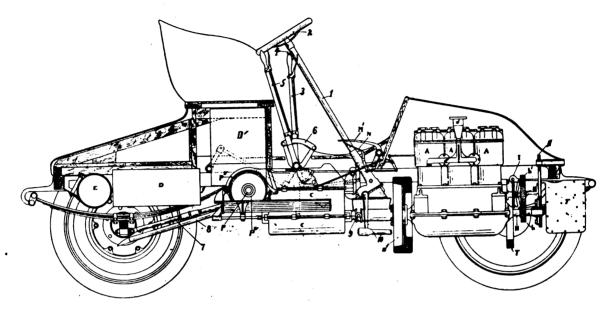
Where the Parts are Placed and Their Relative Locations Shown in Detail.

Without slavishly copying French or German design, the makers of the Toledo gasolene car, the International Motor Car Co., have yet taken full advantage of the experi-

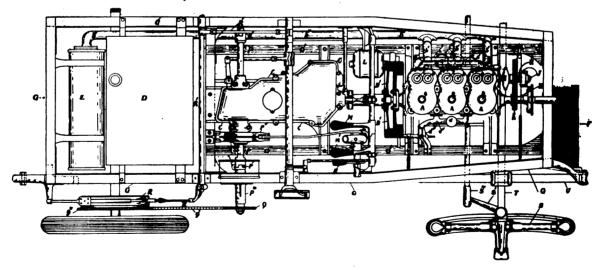
commended themselves to the makers of the

The car is equipped with a 16 h. p. motor of the three cylinder vertical type, $4\frac{1}{4}x5\frac{1}{4}$ each. Cranks are set at 120 degrees. The power is conveyed through a flywheel clutch of $16\frac{1}{4}$ inches diameter to the primary shaft of the transmission gear, which is equipped with the necessary sliding gears to permit three forward speeds. The reverse is effected

each of its extremes. The countershaft is provided with universal joints to compensate for any alteration of alignment due to road stress, etc.; %-inch roller driving chains of 1½-inch pitch carry the power to two 16½-inch 40-toothed sprockets bolted to the spokes of the driving wheels. The driving sprockets are also provided with 1¾-inch brake drums, the band brakes being actuated by the outside hand lever.



A—A—A, Engine: B, Fly-wheel forming clutch member; B', Movable clutch member; C, Transmission gear case; D, Water tank (gasolene tank not shown in fig. 1); E, Muffler; F, Radiator in part; G—G—G—G—G—G—G—A, Ash frame interlined and reinforced with steel; G'—G'—G'—G', Steel sub-frame carrying engine and transmission; a—a—a, Ignition plugs; b—b—b, Exhaust valves; b'—b-b-b; Exhaust tubes; b', Exhaust pipe to muffler; c—c—c, Inlet valves; c'—c'—c', Inlet tubes; c'', Vaporizer; d, Water funnel; d', Water pump connections; d'', Water pump; d''', Cylinder head water connecting tube; H, Engine shaft; H', Engine cam shaft; he proposed in the shaft gear; I, Governor throttling vaporizer; J, Contact breaker and case; K, Wire to hand lever for altering lead of spark; L, Dynamo; M, Clutch pedal; M', Clutch and countershaft brake pedal; N, Throttle lever; O, Steering post bushing and bracket; P, Countershaft; P—P', Countershaft universal joints; P'', Countershaft pand bracket; P''', Countershaft spreaked by hand driving chain; Q'', Right driving—wheel sprocket atched to spokes of wheel; R, Driving—wheel band brake operated by hand lever; R', Brake connections to hand operating lever5; S, Right hand front wheel; S', Steering knuckle; S'', Steering link; T, Front axle; U, Right hand front spring;



1, Steering post; 2, Steering wheel; 3, Change speed lever (3 forward and reverse); 4, Reverse control button; 5, Brake lever, operating on large hub brake drums; this lever also releases clutch; 6, Locking sector; 7, Adjustable distance rod (one on each side); 8, Sprag; 9, Clutch drawing fork; 10—10, Steering connecting levers; 11, Starting sprocket.

ence gained in bringing to perfection these famous foreign cars.

An examination of the details of the car's construction, made plain by the accompanying illustrations, will bear this assertion out. At first view the chassis and plan views can scarcely be distinguished from those of some of the typical French cars; but a closer inspection reveals departures such as have

through an intermediate pinion interposed at will between the first speed gears, thus reversing the direction of rotation of the secondary shaft. This shaft transmits the power by bevel gearing to the spur differential carried on the cross countershaft.

The countershaft is provided with two long bronze bearings attached to the frame of the vehicle, and a 16-tooth sprocket is carried at The speed of the motor is controlled by a throttle governor attached to the inside face of the cam shaft gear. A hand lever controlling the spark lead is also provided and conveniently located above the steering wheel. A large float feed carburretter supplies the cylinders through an ample three way induction pipe. A branched exhaust pipe conveys the exhaust gases to a large cylindrical muffer placed at the rear of the car.



the Motor Morid.

BERG MAKES ITS BOW

Will Place Two Cars of Foreign Type on the Market—Their Details.

There are few men better known or more thoroughly conversant with the automobile trade throughout the world than Hart O. Berg. Particularly is this true of the foreign end of it. For more than five years Mr. Berg was the European representative of the Electric Vehicle Co., and previous to that he was connected with a great Belgian gun works. Consequently his right to speak with authority on all matters pertaining to the automobile is everywhere admitted.

Experience of the sort possessed by Mr. Berg needs only to be associated with capital and manufacturing facilities to make a success of anything undertaken. The Berg Automobile Co., which was organized a short time ago under the laws of New Jersey, is ideally fitted for the work it has set out to do—the manufacture of gasolene automobiles of the highest possible grade. The capital is \$400,000, and with Mr. Berg are associated gentlemen of high business standing. The New York headquarters are at 100 Broadway.

It is the purpose of the company to make two distinct types of running gear—one with two cylinders, developing at 800 revolutions 8 horsepower, and the other with four cylinders, developing at 800 revolutions 15 horsepower.

The 8 horsepower light running gear will have two vertical cylinders, balanced on a new principle, and with bearings sufficiently large to enable it to run for many months without any appreciable wear. All parts of the motor will be most easy of access, especially the valves, which, by the use of a new device, either one of the inlet valves may be removed separately at will in something like five or ten seconds. The carburetter will be readily detachable, and will embody the several principles which are used in the best French and German carriages.

This carburetter is so arranged that the quantity of air admitted is varied automatically as the speed of the engine changes, thus enabling the engine to run most quietly and also allowing of its being reduced to a very slow speed at the will of the operator.

Special attention has been given to the ignition device, which is accomplished by means of a jump spark, and the accessibility of the commutator is such as to enable one to remove the same in less than a minute and replace it in the same time. This commutator is quite new, and the results obtained by continuous running with same has proven it to be satisfactory at all speeds of the engine up to the very highest.

The speed changing device consists of a fixed train of gears, with a moving train engaging with it for the different speeds,

Jo edin yourly injessoons isom by laise change gear. There are three speeds forward and one reverse. On the third, or highest, speed, the transmission is direct without any intermediate gears between the motor and driving shaft. The rear drive is through a large bevel gear on rear axle and small pinion on driving shaft; all of sufficient strength to insure safe work on rough roads.

The driving shaft has universal joints between the gear box and rear axle—the universal joints of this shaft being specially designed with a view of obtaining great strength. All oiling devices are automatic and will require no attention.

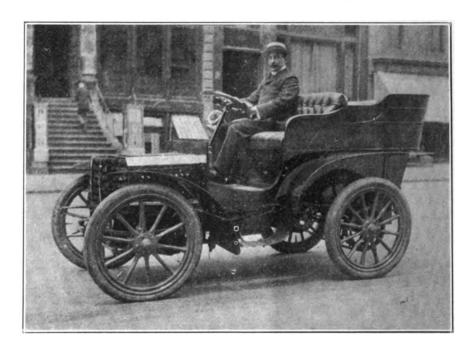
There are two powerful brakes, one on the driving shaft, which is pedal operated and which works through the differential—the other brake being hand operated and work-

will be of the ordinary French type, with exceedingly large capacity.

The gear, when mounted, will be so disposed as to be suitable for a double phaeton, surrey, tonneau or racing body. The body will be entirely independent of the running gear in every respect. The maximum speed of this carriage will be thirty miles an hour, and grades of 25 per cent can be readily negotiated by it.

The 15 horsepower carriage will have a motor with four cylinders, and of the same type as that of the 8 horsepower carriage. The rear wheels will be chain driven on the Panhard principle.

This running gear will be fitted with 34 inch wheels. The frame of the gear will be longer and heavier than the 8 horsepower carriage, and a very large carriage, or small omnibus or delivery wagon, can be readily



ing directly on drums attaching to each wheel. There is but one lever controlling all speeds and reverse; both brakes work on the clutch disengaging same before braking the carriage.

The wheels are 32 inches in diameter, all four of equal size; the wheel base is extremely long, and the carriage is hung very low, thus insuring great stability.

Special attention has been given to the length and size of springs with a view to obtaining easy riding over rough roads.

The steering is controlled by a wheel, and is worked on a nut and bolt system, reducing the back lash to a minimum and making the steering positive. By a pedal contrivance the engine can be made to run from 400 to 1,200 revolutions, at the will of the operator.

The carriage will be supplied with gasolene tank with sufficient capacity to carry it 150 miles. On account of the large surface of the radiating coil the water in the water tank will rarely have to be renewed. The pump will be incorporated in the engine, and

adjusted to same. The maximum speed of this carriage, with light body, will be fortyfive miles an hour.

Will Fight the Ordinance.

An obnoxious automobile ordinance, now pending before the Milwaukee (Wis.) Council, is being bitterly fought by motor vehicle users of that city. If the efforts to bring about a peaceful solution of the matter prove of no avail automobilists say that they will carry the ordinance into the highest court, if need be, to establish their rights to freedom from taxation of their vehicles and other points brought up by the ordinance.

Recognizes Services Rendered.

A donation of \$100 has been made to the Smith Infirmary, Staten Island, by the Automobile Club of America, in recognition of the services rendered after the accident on May 21.

Manager C. C. Hildebrand of the International Motor Car Co. is enjoying his vacation in Canada.





Published Every Thursday

By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING.
154 Nassau Street,
NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

Lendon Office, 53 Fleet Street, Paris Office, 2 Rue d'Abbeville,	•	:	C. W. BROWN. R. F. COLLINS.

Subscription, Per Annui				. \$2.00
Single Copies [Postage]	Paid]			10 Cents
Foreign Subscription	٠.			. \$3.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of publication.

Those who are interested in motor vehicles will find the facilities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address Motorworld.

Entered as second-class matter at the New York, N.Y. Post Office, November, 1900.

NEW YORK, AUGUST 14, 1902.

As Plain as Day.

No amount of hair splitting will avail to refute the assertion that the man who accepts cash fgor winning a place in an automobile races ceases to be an amateur.

No evasion, no confusion of the issue, no citation of Jockey Club methods, can alter that fact.

Every lover of sport knows that the man who, to use a vulgarism, "is out for the stuff," whether forced to this course by necessity or inclination, forfeits all claim to the title of amateur. The cry of "rich man versus poor man" has no real bearing on the matter. It is probably raised to confuse the issue.

As a matter of fact, the richer a man is the less excuse he has to make money out of his sport. The plea of "expensive rigs" is one that he raises with very ill grace, for he is free from the sordid cares which vex and harass less favored rivals.

There can be no half way business about the matter. There must be an amateur rule, and it will simply put in words what everybody has put in thoughts—the acceptance of cash in place of plate puts the recipient without the pale. That is a fact recognized the world over. No juggling of words will change it.

/ Observers and Observing.

That observers do not always observe was again demonstrated in the Chicago 100 mile run of two weeks ago. Incompetency, if not worse, is charged against some of them, and there is considerable dissatisfaction in consequence.

The difficulty experienced in obtaining the sort of men wanted is, of course, a reason for the failures so often complained of, but it is no excuse.

In direct ratio to the onerous nature of the task should be the efforts made to perform it satisfactorily. A certain amount of time and care spent in selecting the men, a patient winnowing for the purpose of separating the wheat from the chaff, a judicious but inexorable pruning of the lists presented, would go very far in the direction of removing the abuses complained of.

It is a pleasure to record that the committee in charge of the Reliability Run of the Automobile Club of America is fully alive to the importance of this matter.

In conversation with Chairman Scarritt we were told that this was a matter that would receive very careful attention. The fact that during the run the observers will be the guests of the club imposes a double obligation—on the side of the club that none but good men be put on guard; on that of those who volunteer to observe that they perform their duties conscientiously and well.

The result will be awaited with interest. If this, the most important as well as pretentious function of the year, if not of all years, can be "observed" in good shape it will be cause for congratulation and a big feather in the committee's cap.

From the nature of the case, the selection of competent observers will be both easier and harder than has been the case with one-day runs.

The number of desirable men who can spare a full week for an event of this kind is limited.

The prospect of a seven day junketing trip

at the expense of such a host as the A. C. A. is certain to attract no small number of "grafters." It will be necessary to head them off.

Trend of Transmission Methods.

It would be a rash man who asserted at this time that the last word had been said about gearing, especially of the gasolene car.

That entirely too much power is wasted in nearly all of these cars will be rendily admitted. Conservative estimates have placed it as high as 50 per cent in some types, and the statement has been accepted without any marked dissent. The figures are manifestly too high to apply to all cars, but even the best of them eat more power in the transmission than is at all pleasant to contemplate.

At one time, and that very recently, it looked as if all the world had come to the conclusion that the Panhard system, as the shaft and chain and sprocket method is usually termed, was far and away the best that could be devised. The rage to copy French and German cars, many of which employed this system, was very marked, and it was not uncommon to see the phesence of chains to rear wheels held to stamp a car as up to date, and their absence to argue the contrary.

It loke as though that day had passed, however, in so far as the chain monopoly is concerned.

The wonderful success of the comparatively heavy Renault car in the Paris-Vienna race did much to change the feeling referred to. It had been known that a bevel gear drive, if properly designed and constructed, was all right for the lighter cars, such as those that had made the Renault type famous. But that as high as 40 h. p. could be applied to a transmission of this sort, and with almost unexampled success, was something that was not even suspected by the average observer.

It is plain that we are in for a more thorough and more extended trial of bevel gears, not alone on gasolene cars, perhaps.

The result will shed considerable light on the subject, and perhaps lead to further experimentation with transmission methods infinitely less complicated than the Panhard type referred to. The direct, or almost direct, chain drive used on so many American cars may also come in for more attention than they have been receiving from the admirers of the foreign systems.

As to Gasolene Consumption.

In view of the rapidly, as well as steadily, increasing use of gasolene in explosive motors and steam engines, the fears, expressed more than once, of a gasolene shortage seem far from groundless.

The quantity of gasolene and other petroleum products required for launch motors is something enormous and is growing all the time.

Yet it is already almost, if not quite, equalled by that needed for automobile use, and it is only a matter of a short time when it will be left far in the rear. The launch is confined to comparatively few localities, in which it must work out its allotted task. But the field of the automobile is limitless. It embraces the entire country, and will in a comparatively short time be found wherever there are roads or land on which to build them

So far electricity is the only rival that gasolene meets with. Alcohol has not entered the lists and is not likely to do so. Gasolene is too abundant and too cheap to make experiments with alcohol necessary.

An idea of the huge consumption of gasolene is obtained by an examination of figures furnished referring to the amount used in New London, Conn.

On a recent Saturday no less than 7,400 gallons of gasolene were delivered. This was exceptionally large, to be sure, but the daily deliveries seldom fall below 2,000 gallons, it is stated.

Much of this is used for launches, New London being situated at the mouth of the Thames. Nevertheless, it affords an idea of the consumption at similar places, and gives a line on the amount that must be used in cities and towns where automobiling is indulged in to a considerable extent.

Outlook Shows an Improvement.

It begins to look as if the anti-automobile tide has reached its ebb, if it is not actually turning. Fewer malicious and vicious laws are being passed, and some fairly reasonable ones are being put through.

The Buffalo and Denver ordinances, referred to in another column, are instances of this tendency.

They are, if not all that could be desired, at least all that could be looked for with reason. Eight miles an hour is not a speed to be specially proud of, but when it is confined to the business sections, as is the case in both cities, and a much more liberal

limit is fixed outside of these boundaries, substantial ground for rejoicing can readily be found. Sooner or later the automobile is bound to come into its own.

In conjunction with the trolley car, it will hold the key to urban as well as suburban traffic. The logical demand for real rapid transit will be heeded, and these two modern vehicles will be made the means of furnishing it. Horse drawn and other vehicles, pedestrians—in brief, all other users of the roads—will have to shape their movements so that they will interfere as little as possible with the swiftly moving passengar carriers. When they get in the way it will be Stephensen's locomotive and cow over again; and it will be bad for the cow.

But at present a different situation exists. The trolley car has won its battle, the automobile is just beginning to wage its. Naturally, the storm of opposition is much greater than it was with the trolley car, for the latter served more people. Consequently we must bow to the storm, and even submit to absurd restrictions for the time being.

Already, however, it is being realized that it is futile, as well as unwise, to attempt to stop the progress of the motor car.

It is here to stay, and its growth will be tremendous. Ere long the very people who abuse it will be its advocates, and those who now laugh will remain to praise. The wave of anti-automobile legislation has reached its highest point, and will shortly begin to recede. A little patience, and we shall watch its retreat with vastly different feelings to those we felt during its onward rush.

Two Irish Routes Proposed.

Serious consideration is being given to Ireland as a place where the 1903 Bennett Cup race could be run off. The matter has got so far that routes are being talked of. The Motor News suggests two routes, one making a 310-mile run, the other measuring but seventy-eight miles. As even the first is too short, the cup races averaging about 360 miles, some of the roads must be retraced. But it is pointed out that there is no real reason why this should not be done. Both routes start from Dublin, and roads sufficiently good to enable the race to be run are youched for.

The funny little Hungarian who adds amusement to automobile journalism, and whose chief claim to distinction rests in having abruptly and for cause ceased to be a member of the Automobile Club of Amer-

ica, is fairly frothing at the mouth at the bare idea of the amateur line being drawn in automobile sport. It is evidence that he has once more forgotten that no one—himself excepted—takes him seriously and that neither he nor any other individual who is "out for the stuff" is expected to welcome any rule that will prevent that class from masking in the garb of genuine sportsmanship, which is the real purpose of the amateur distinction.

Blacksmiths and wheelwrights are discussing the opportunities for their admission to the automobile industry. About everything entering into the construction of motor vehicles, they assert, can now be purchased part by part, and there would seem to be no reason why they should not be able to assemble the parts to their profit. Automobile repairing, moreover, is from now on bound to be an important part of the blacksmith's work in the country towns, they say, and when once the proper tools have been procured for repair work, the blacksmith should be fairly well equipped for new work.

Stables and other large buildings suitable for storage along the Jersey shore are being seized by far-seeing speculators in anticipation of the transfer of the automobile craze to the summer resorts. At Asbury Park, for instance, the basement of the big auditorium building near the beach has been converted into a garage and charging station. It is filled with vehicles and overrun with business. Like prosperity has visited other similar establishments and brought their proprietors handsome returns.

There are upward of a quarter of a million jinrikishas in Japan, and if even a tithe of these could be replaced with motor vehicles the islands would be ideal ground for the automobile salesman. The poverty of the average Jap would, however, preclude any such wholesale substitution, although it is said that the upper classes are very keen on the self-propelled vehicles.

A politicians' automobile club—and Tammany politicians at that—seems almost unthinkable. The vehicle beloved of millionaires to feel the weight of baser clay? Perish the thought! Yet 'tis asserted that such is the case, and that hereafter the chug-chug of the motor and the odor of the gasolene will be pleasant in the ears and nostrils of the faithful.





I have always had an idea that if you wanted to capture a fly you were more likely to succeed by employing a bit of sugar than you were if you used a sledge hammer or even a pile driver. This may have been true in the days of the horse and his friend the fly, but now we have automobiles, and while motor vehicles are putting the horse and the fly out of business, they are incidentally doing the same thing for the above idea of mine.

The best proof of this is furnished by an iliustrated weekly which from the very beginning has been absolutely hysterical in its attacks upon the automobile. In every possible way, by illustration, editorial, sneer, innuendo and even by poster this little 8x12 weekly has opposed and traduced the automobile, its owners, makers and users in every way possible. No sugar in that, is there? Well, from first to last the advertisers of automobiles have fairly run over themselves in their anxiety to pay fancy prices for advertising space on the pages of this paper, which in every way possible was and is trying to ruin the automobile makers' business. You'd think pride, if not resentment, would cause the automobile advertiser to leave severely alone a paper which never fails in the most insulting manner possible to impress upon him that neither he nor his wares are welcome, even though his money is. You see, you can catch flies with sledge hammers—that is, automobile files. Such is life in the rapid travelling motor vehicle age in which we live and learn the foolishness of our former beliefs.

This recalls to me the new definition I heard recently of "a soft job." The speaker said it was just like getting a hundred dollars a week to keep flies off an automobile. Seemed to me that you couldn't miss the idea after such a simile.

* * *

For the last week I have noticed in the daily papers an advertisement offering "\$100 per month, board, lodging and clothes, for a man competent to run and care for a 16 horsepower French automobile." That the advertisement was inserted more than once proves conclusively that even on such tempting terms it is no easy thing to get a competent man. Think of the men who are standing ten or more bours each day on the front platform of an electric car for less than \$75 per month, and paying for their own board, lodging and clothes besides! Here are men whose nerve, quickness of decision, eye and action would make them ideal chauffeurs, and yet the man who is willing to pay \$100 per month, and furnish board, lodging and clothing for a man to work at the most only a few hours a day and a few days in a week,

cannot get a competent man. Why? First, because the men who are on the front platforms haven't the knowledge, and they will not acquire it because they think the position of chauffeur is a menial one, and so, like good Americans, they would rather rough it as a motorman than lord it as a chauffeur. You really wouldn't believe there were so many fools of so aggravated a type as this, now, would you?

. . .

Alas! how swiftly fashions change,
In modern thought as well as dress.
We fill the air with phrases strange;
Then leave them to forgetfulness.
About the deadly cycle all the land
Once raised a most persistent row.
But automobiles take command,
And no one howls at cycles now.

* * *

The effect of early training was brought home to me in a rather interesting way on Saturday. I was coming downtown on an Eighty avenue surface car; directly ahead of us was a large motor truck, bearing the name of one of the biggest Sixth avenue department stores. Despite the fact that it was travelling on Central Park West, where the entire street was perfectly asphalted, thereby affording an ideal surface for the big truck to show the advantages of a motored vehicle over a horse drawn one, the driver had left the asphalt and was running the vehicle in the cartracks, which were cobblestoned. The gauge of the track and that of the track were slightly at variance, so in consequence one set of the truck's wheels were bouncing along half on the edge of the cobbles and half on the iron car rail.

You could almost see the chunks dug out of those rubber tires. The truck wrenched itself clear of the tracks and on to the asphalt, the surface car passed, and the man in charge of the motor truck promptly swung it back on the tracks and the cobbles; then he bounced and banged along in the wake of the car. You see, that man had just as sure as anything been a driver of horses, and when he was put in charge of a vehiclepurchased at a great price by his employers because its motor was superior to the horsehe went right along just as though he was still handling the animal, thereby almost entirely negating the advantages which the new vehicle undoubtedly had.

Under such conditions as the ones I have noted, and they are by no means uncommon, I can readily understand how big concerns declare after an expensive trial of the motor vehicle that it is more expensive and less satisfactory in many ways than the horse drawn one. The fault is not with the vehicle so much as it is with those placed in immediate charge of them. Would these same drygoods people take one of their engineers of an elevator runner out of their stores and put either of these men in charge of a valuable team of horses and a wagon for which they had paid \$5,000? Of course they wouldn't. Yet that engineer or that elevator

man would be very much more likely to make a success of driving that team than the original driver of it would of properly handling or caring for a motored vehicle. You can't teach an old driver new tricks, and the man who has been raised among horses will come pretty near dying among them. The new conveyance is a mechanical proposition, and it demands mechanical care and handling by some one mechanically inclined. Until this is thoroughly recognized you will find the supplanting of the horse by the motor a lengthy, expensive and unsatisfactory proceeding.

* * :

Whether it is because the drivers of automobiles do not indulge in speed work as much as formerly, or whether it is because they find no real reason to make themselves look like animated death's heads, I do not know, but certain it is, be the cause what it may, that the mask and goggle are to-day more the badges of the novice than of the expert. With the passing of the face cover has also come the departure of the leather cap of pancake shape. Neither eyepiece nor skypiece will be missed; automobiling has quite enough to answer for without continuing to act as sponsor for these caputal monstrosities

* * *

Scorching is reprehensible. Few there are who will gainsay that; yet no one can ignore that tendency to admire "records" which is part and parcel of the times in which we live. It is deeply rooted in our nature, this inclination to admire the most expert in any direction, nor is it either safe or wise to despise it. It is a first rate counteractive to the other tendency to be content with things as they are, which has beset poor humanity since the first wheel was someway affixed to the first axle and the first vehicle thereupon made a possibility. To hasten slowly may be in all things a most excellent rule, but the emphasis can sometimes and in some places be laid upon the "hasten" with considerable advantage to almost every one. Life has become so fast that the saving of an hour or two on crossing the Atlantic is sufficient to draw the custom of the keenest and most successful-therefore the wealthiestmen, whom others follow as sheep the bell wether. We might as well admit that what is true of the ocean greyhound is true in every particular of the automobile. France has been quick to recognize this speed love, to cater to it and to profit by it. Can we afford to shut our eyes and pockets to this? Would it not be well at this time and place to remember Carlyle's warning about the Anglo-Saxons and their "pot bellied equanimity" and resolve that we will acknowledge the correctness of the Frenchman's teachings and make of speed a thing commendable, not damnedable? There's two sides even to scorching, and we have had only one side of it exploited. I thought I'd just give you a glimpse of the other to see how you liked it.

THE COMMENTATOR.



FOR BUSINESS USES

Wide Field Which the Motor Vehicle Covers— Municipalites Served in Many Ways

"That there are great possibilities for the self-propelled vehicle in connection with borough and county work few will deny, but it is doubtful whether the full extent of the numerous purposes to which it can be put is fully realized at the present moment. Up to the present some of the more enlightened local authorities have organized services for street watering and dust collection by means of motor vehicles, and, moreover, some attempt has been made in one or two cities to employ the motor in connection with the fire brigade work," says an English motor engineer.

"The design and construction of the self-propelled vehicle have to-day reached a standard of excellence which renders it eminently suited to all classes of work, and serious consideration should be given to the claims put forward on its behalf. The main questions are economy and reliability of running, and, perfected as it now is, the motor vehicle embodies both qualities to a very marked degree. Reliable evidence on these points is readily to be secured from the many private owners who make a practice of noting down valuable data relative to their motor vehicles.

"There are cars which for years past have been running week after week and month after month at a cost for fuel of %d. per mile. Good results, however, are only to be secured by the employment of a thoroughly capable mechanic. No greater mistake can be made than to commit to an inexperienced man the charge of a motor vehicle, and no doubt many have false impressions as to the cost of maintenance of motor vehicles owing to the repairs that have been necessitated by the absence of intelligent care on the part of the individual whose duty it is .o clean and adjust the somewhat delicate mechanism of the car. The initial cost, the expenses of maintenance and the rate of depreciation are all points demanding consideration; but no comparison can be made between a motor vehicle and one drawn by a single horse, as is only too frequently the case, for one of the former will do the work of at least three of the latter, and it is on this basis only that any attempt in the way of comparison of cost should be made. Again, false impressions of the cost of maintenance of motor vehicles are obtained by the use of unsuitable types. The smaller and more lightly constructed vehicles, while eminently adapted for occasional use for pleasure purposes, are not nearly so suitable for constant daily heavy work, and in such cases vehicles of a more substantial type at a considerably greater capital cost should invariably be employed, and under such circumstances it may very well be said that within reasonable limits the greater the capital cost of the

vehicle the cheaper its ultimate cost in maintenance.

"Motor carriages can be employed by municipal and county bodies in many different ways. What better means of conveyance could be adopted by city engineers, county surveyors, chiefs of police or fire brigades or other civic officials whose duties so often require prompt attendance at some distant spot? A couple of minutes after a hasty summons a motor carriage could be got away, and, running rapidly and smoothly through the traffic, convey the fire brigade chief to some fierce outburst or the chief of police to the scene of a disturbance. No waiting for preparations, but an instant departure, and a journey made at a speed as fast as it is untiring.

"City engineers and county surveyors should also gladly welcome a light, fast and reliable vehicle, as by its means their duties could be much more expeditiously performed, and they would be always assured of quick arrival at any given spot when urgent need arises. The county surveyor and his principal assistants should find motor vehicles almost indispensable to facilitate their work, for the extreme length of the journeys these gentlemen have to take makes the motor vehicle incomparably the best of existing means for getting about the roads; and, as a secondary but by no means unimportant consideration, should be borne in mind the fact that the mere act of a motor vehicle travelling at a comparatively fast pace over the roads would enable him to determine the condition of the latter and their comparative need of repair.

"Again, local authorities who have electric and other tramway systems under their control might well avail themselves of motor vehicles, both for the service of their engineers in the inspection of the lines and for the conveyance of repairing gangs, etc. A large tramway company to which the writer is one of the engineers has actually availed itself of this method of transporting its engineers, and also the Compagnie de l'Est Parisienne has done the same thing for years past. Workmen engaged upon laying and repairing roads and gas and water mains might be carried cheaply and expeditiously, together with their tools and materials, to the point at which the work is proceeding.

"Motor water and dust carts are already in use, but only to a limited extent; yet they perform their duties so admirably that considerable expansion in this direction may be safely anticipated, and with it the appearance of self-propelled street scavengers and other machines of special design for the public service. Very naturally, constructors of motor vehicles are chary of launching out into the heavy expense which would be involved in designing and constructing special machines of this class until some encouragement is forthcoming from local authorities; but, given that, rapid progress will assuredly be made, and all manner of self-propelled vehicles for heavy work will be brought into practical use.

"It therefore follows that it is largely to

the borough and county engineers the motor car trade must look for the initiation of directions in which motor cars may be utilized, and having regard to the well known enterprise of these gentlemen, whose interest it is to see that the cheapest and best methods are used by the local authorities whom they represent, there is little doubt that the next few years will see a very large extension in the utilization of these vehicles."

Made Matters Worse.

If automobilists would take some trouble to look into the matter they would often see that much could be done to abate the dust nuisance.

On a recent dusty day a medium-sized car was observed, and although the pace was slow, a huge cloud of dust was raised, and completely covered the wide main road over which the car was travelling for quite a long way back.

The mudguards of the back wheels were brought down in conformation with the wheels to a point which would appear to prevent any mud whatever from splashing on to the car. So far so good, but from this point each guard had been fitted with a long flap, which almost scraped the road as the car went along. Needless to point out, these flaps as the car moved simply fanned the dust up in huge clouds, even though the pace was but a moderate twelve miles an hour. In fact, the dust stirred by this car was more than is usually raised by a much larger car of double the horsepower, and moving at twice the pace.

Even granted that the flaps may have been necessary in very muddy weather, the fact remains that they were not necessary in the dust, and should have been turned up so as not to cause such inconvenience to all other users of the road.

Substituted Rope for Tire.

That old "chestnut," the story of the substitution of a rope for a pneumatic tire that had been put hors de combat, is going the rounds again, this time being applied to motor vehicles.

"Some time since Professor Hele-Shaw, when driving one of his cars, found that the front tire on the off side was deflated. On examination it was found to be past repair, as the air tube had perished, and as fast as it was mended in one place it blew through in another.

"He therefore got some rope and wound it round the groove of the rim until it stood well outside, and then he bound it transout cutting the rope at all, and Professor versely. The car ran several miles with-Hele-Shaw believes it might have been driven thirty or forty miles without injuring the wheel or making a very appreciable difference in the running of the car."

Running Gear From Reading.

Running gear for a gasolene touring car is being brought out by the Reading Automobile & Gear Co., Reading, Pa. A complete 8 horsepower car will also be manufactured. It will be of the motor in front type, with vertical cylinders.



RENAULT FRERES

Some Interesting Particulars Concerning the Three Famous French Racing Men.

An extremely interesting account of the brothers Renault, one of whom, Marcel, was the winner of the Paris-Vienna race, is given by M. Georges Prade, the special correspondent of the "L'Auto-Velo," in that paper.

"There are three brothers named Renault, and the third is Marcel, the victor in the great Paris-Vienna race and also in the Paris-Toulouse, in which he only ran a volturette," he says. "Louis Renault, the father of the Renault motor, was only stopped from victory himself by a collision with Baron de Caters, and he was for years the incontestable champion of the volturette. There is also Fernand Renault, the eldest of the three brothers, the Berthier of these two young generals, and organizer of these triumphant campaigns.

"It was in 1899 that I made the acquaintance of Louis Renault. He could then only have passed his majority, and looked barely nineteen years old, with his little growing mustache. He presented to me a very small engine, about the height of a chair and the length of a small table. This was neither more nor less than the famous Renault voiturette, with which a few days later Corre and myself began the tour of Europe, and arrived for the first time in Vienna, where a development of the same engine came in first last week. It is therefore an astonishing history that has to be told of the brothers Renault. Of a very rich family, and attracted solely to the automobile by personal taste, they had made a tricycle. The motor of 1% horsepower with which it was fitted was barely sufficient to carry its rider. Towing was not then practised. The passengers had to be side by side. On the level, when the road was good, the motor was more than able to draw a heavier load than that imposed upon it. Why? Because the motor was taken direct. 'Let us make,' said he, 'a motor cycle with two seats side by side, which on the top speed acts directly.' Thus with a single stroke of genius that young man created the voiturette.

"Take the little implement with which he won the Paris-Trouville and the Paris-Ostend, and with which we went (an unheard of thing for that epoch) from Paris at 29 kilometres to Vienna, through Italy, about 2,000 kilometres, without a serious accident, and you will find that all the countless voiturettes and light carriages have since been created by augmentations of this primitive type.

"There was already the vertical motor in front, a De Dion-Bouton of 2% horsepower, the same as that which Corre had upon his motor cycle in the tour of France. There was the regulation of the gas and the advance to lighting, transmission by longitudinal cardan and angle pinion, taking the

differential direct, on the top speed. It was small, narrow, and weighed only 212 kilogrammes; but it was so well made that it traversed the Simplon, the roads of Austria and their high keystoned arches, the Dos d'Ane, and Belgium, with its rude pavements. Since then the inventor has only had to develop his primitive type, and from the small voiturette, of which I cannot think without emotion, has come out triumphantly the four cylinder machine which all the world knew the day after the Paris-Vienna race. Therefore, apart from all other considerations, and apart from the joy of seeing a French vehicle come in first. I had the pleasure of seeing in the victory of Marcel Remailt the success of an old friend."

Louis Renault made an heroic struggle against ill luck in the same race, according to M. Prade.

"He was ahead at the third stage, and at Arlberg he had passed all the heavy machines save Pinson and the brothers Far-

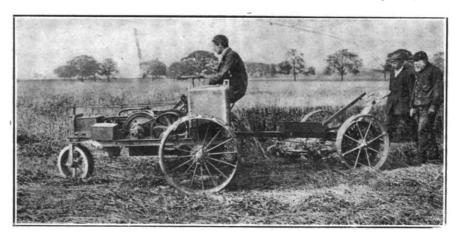
FARMER'S FRIEND

Motor Agricultural Implement Which Mows, Reaps, Sows, Roots and Grinds.

Farmers will undoubtedly be among the greatest beneficiaries when the motor agricultural implement comes into general use. Makers of agricultural machinery everywhere are awakening to a realization of this fact, and are bestirring themselves to be in the vanguard of improvement.

Designed for farmers, the motor vehicle illustrated, which is of British manufacture, can be put to a variety of uses. It is of the portable type and constructed to draw mowers, reapers and other agricultural machinery. Apart from its full use, chaff cutting, root pulping and corn grinding are well within its province.

The motor is of 8 horsepower, double cyl-



man, when the car of Baron de Caters came on in the cloud of dust. The driver of the big car could not stop, and collided with the light vehicle. The back spring was broken, as also the gear box, and for three mortal hours he worked with his hammer to repair the damage. He then sped over the bad roads in frightful bounds with great daring, passing a dozen vehicles. While covering 70 kilometres an hour he left the road, struck a ditch and broke a wheel.

"Another man would have given up the struggle, but he went to a house, found some tools, and with some dry oak, by means of a saw, hatchet and other tools, repaired the wheel and started again, arriving the same evening at Salzburg. The next day he started with his primitive wheel and arrived fifteenth at Vienna, making, after his brother, the best time of that long journey. When such determination and such intelligence are united it is rarely that marvels are not accomplished."

Building an Experimental Car.

The Trenton Iron Co., Trenton, N. J., is contemplating engaging in the manufacture of automobiles. They write to the Motor World that an experimental vehicle is now being constructed, and if it proves successful they will probably embark upon the business.

inder, water cooled. It has electric ignition, one speed forward and reverse, and the inventor claims that any intelligent man can drive it after a short tuition.

Simplicity is the keynote of its construction. The engine is free, and when put in metion a friction clutch is employed to transmit the power through an intermediate shaft to the balance gear shaft of road wheels, by means of patent silent chains. The wheels have extra wide rims, with grips to prevent them from skidding round. For travelling on the high road detachable rubber pads are attached to the rims of the wheels by means of thumbscrews. These rubber pads minimize vibration and lessen the noise. The cost of fuel in running the motor is very small, and works out at considerably less than that of horse labor.

Superintendents to Have Automobiles.

Several electric automobiles, including two surreys and four tonneaus, have been ordered from the Electric Vehicle Co. by the New-York Edison Co. They are to be used by superintendents of the various illuminating and power companies in New York City and Brooklyn which are controlled by the Edison company. The tonneaus will be furnished with special rear bodies similar to those provided for the chiefs' wagons supplied by the Electric Vehicle Co. They will be delivered in a few days.



FLYWHEEL FACTS

Necessity of This "Reservoir of Power" is Indisputable—A Matter of Weights.

The flywheel in gas engines serves as a reservoir of power. It affords a medium between the piston impulse and the running gear, equalizing motion and converting the intermittent violent force of successive explosions into a smooth and continuous force. Without it each charge exploded within the cylinder would be felt as a shock as unpleasant to the occupant of a motor car as it would be injurious to the working parts. The flywheel, however, intervening, the shock expands itself upon this, and the revolutions imparted to it become a smooth and constant energy which in turn transmit a smooth and constant energy to the running gear. At the same time the flywheel, producing no force of its own, being in point of fact a device whereby force being equalized is also expended, it must be realized that according to its weight it is an embarrassment and a source of loss.

In a stationary gas engine this is of little consequence, but in a travelling carriage the weight of a heavy flywheel to be carried whithersoever it travels becomes a serious matter. The heavy flywheel presents itself indeed to the mechanical mind as in such case an error of construction. What then is the alternative? The flywheel gives harmonious running, a most important, indeed, and imperative, requirement. If we dispense with the dead weight of it which proportionally impairs our speed, our capability, and flexibility, strains our braking apparatus, and lengthens the times of starting and of stopping, how else are we to convert the intermittent impulses of the piston into an even and a constant force?

The answer is—by adopting the multicylinder motor. This seems, indeed, the only indication. With each additional cylinder the size of the flywheel may be considerably reduced without impairing ease or smoothness of action. For with each additional cylinder, not only is the charge for each explosion (and the force therefore of each explosion) diminished, but the explosions take place more frequently, the processes within one cylinder going on while another is making itself ready. And the more frequent the explosions, of course, the more nearly they approach to being continuous.

For example, in a single cylinder motor, to produce a given amount of energy the charge must be three times as large the explosion, therefore, three times as violent) as where there are three cylinders, each of which with a charge one-third as large produces an explosion two-thirds less violent, the sum of the force of all amounting to the same. Moreover, as an interval must be given to the single cylinder to exhaust its exploded charge and to prepare itself for another, the explosions of the single cylinder

engine, being markedly intermittent, are obviously shocks. With multi-cylinders, while one is exploding another is preparing, and so forth, so that a rapid succession of weak explosions takes the place of the less frequent more violent impulses of the single cylinder. And this rapid succession of weak shocks it is which, imparting smoother and more nearly continuous impulses to the running gear, renders the multi-cylinder engine almost independent of a flywheel. Some sort of flywheel is needed, but the need has been calculated as decreasing "inversely as the square of the number of cylinders." a triple cylinder engine therefore requiring only oneninth of the flywheel required by a single cylinder engine of the same power. To put it into numbers, a triple cylinder motor of 8 to 10 horsepower will run smoothly with a 40-pound flywheel, while a single cylinder motor of similar powers will need a flywheel of some 340 to 360 pounds in weight. And this additional weight, which contributes neither to power nor to strength, means more than 300 pounds added to the burden our vehicle has to propel up hill, down dale, along every mile we make. The small, light flywheel of the multi-cylinder, moreover, produces flexibility of motion; its revolutions cease shortly upon the throttling of the motor, they speedly recommence upon respening the throttle. These and other considerations point to the still further application of the multi-cylinder to motor vehicles.

Takes Place of Sixty Horses.

What is claimed to be the largest automobile in the world is now in Southern California. It is being employed at the present time on the Freeman or Centinela ranch, near Inglewood, in cutting 40,000 acres of barley. After it is through here it will be in operation on the big ranches in the San Fernando Valley.

The big machine consists of a traction engine capable of hauling seventy-five tons, and which takes the place of sixty horses; a header, or mowing machine, which cuts a swarth thirty-six feet, and a thrashing machine all complete. The thrashing machine and header are run by a 30 horsepower engine entirely separate from the traction engine, save that they both get steam from the same boiler.

The apparatus moves over the ground at different speeds, according to the thickness of the crop, while all the time the header and thrasher are going at full speed, whether the grain be thick or thin.

The average speed made is three and a half miles an hour, but the straw in this section is tough and the fogs at night keep the grain damp, so that seldom more than two and a half miles an hour are made.

One hundred acres a day can be thrashed by the machine, but owing to the toughness of the straw just mentioned that limit has not been reached on the Centinela ranch.

A motor tour from Southampton to London was recently made by Sir Thomas Lipton.

HYGIENE OF MOTORING

Better Than a Doctor's Prescription Declares a Disciple of Aesculapius.

"The lungs are a sort of carburetter," is the happy way a British physician puts it in dealing with the hygiene of automobiling. He strongly recommends motoring for delicate persons, and especially those with consumptive tendency, or those actually suffering from phthisis, sleeplessness, disorders of the liver, anæmia, asthma, cold in the head and for those suffering from worry.

As regards the question of exercise, he bears out the contention that there is a good deal of healthful exercise in motor driving. He says:

"But the continuous observation, attention, reflection and quick formation of judgments and the quick acting upon them which take place in driving a car, and especially a fast car, all mean that bodily machinery is working. A visual image received on the retina occasions nervous impulses which are conveyed to certain parts of the brain, where an impression is registered and impulses sent to other parts of the brain; a sort of consultation may be said to take place between groups of cells that are the physical bases of past experiences, a course of action is decided on, and impulses are transmitted to the cells of that part of the brain concerned with motion, and from there the most amazingly exact impulses are sent in ordered sequence to the muscles.

"A description of the variety of this mechanism would fill a treatise. It must suffice to say that the intelligent overseeing of the working of an engine, combined with the quick change of scene and the varying interests of motor car driving, have effects on the whole nervous mechanism of body and brain, whereby healthful rest of the parts more in use in everyday life, and exercise and development of those that may be in danger of deteriorating from disuse, tend most emphatically to produce the mens sana in corpore sano.

"Motoring is in fact a sport, and a sport not involving cruelty; one giving scope for some of the very highest intellectual capacity, and that is capable of giving a training of no mean order in such virtues as caution, courage, resourcefulness, carefulness, quickness and endurance."

Prepared for Trouble.

Elaborate arrangements were made to supply the wants of the contestants in the Ardennes Circuit race. At frequent intervals depots were installed by the Michelin firm, who are thoughtful enough to give the dimensions of the pneumatics to be found. Other firms followed suit. Great reserves of alcohol were also installed, with special oils. In addition to this, a cart laden with these two necessaries and water during the race made the tour of the course.



GLORY FOR GLENCOP

And Also Defeat in the Game of Holding up "Devil Wagons."

The famed massacre of Glencoe may have a repetition in this country if the war between officials and residents of the Chicago suburb of that name proceed to much greater extremities.

Glencoe is north of Chicago, near the lake front. For some reason it fairly bristles with antipathy to automobilists, and even Mayor Harrison of Chicago was threatened with arrest recently for alleged speeding. The modus operandi of the local police is illustrated by this description from a local paper:

"Early in the morning the entire police force, composed of six men, under the lead of Captain Dennis, was stationed along Sheridan Road to catch any chance or regular violators of the speed ordinance of Glencoe. The members of the force arranged themselves along the drive a quarter of a mile apart. They were equipped with fiags to signal each other and stop watches to time the devil wagons.

"It was not long before a large red machine appeared, and the two policemen who timed it declared it ran the quarter of a mile in thirty-five seconds. Policeman Grant then signalled with his flag to Policeman Mathews, who stepped out in the road further down and shouted to the driver to stop. The driver paid no attention to him.

"This Mathews is a determined man. Only last Sunday he held up the coach Old Times and dragged Liveryman James Martin before a justice of the peace. Instead of a gun Mathews carries a club four feet long. The club is of seasoned hickory.

"The chauffeur, not knowing Mathews's prowess, increased the speed of the machine to the utmost limit, and, regardless of the law of Glencoe, made directly for the waiting policeman. The latter stood his ground as long as he dared, and then jumped suddenly out of the roadway.

"The conqueror of the Old Times had not dared to tackle the devil wagon, even with his hickory club.

"As the chauffeur sped by he turned, laughed at the policeman, and waved him a goodby with his hat.

"Policeman Mathews, thus defied, called to Brant and Hall, and Hall was sent for a rope. Without much delay he returned with a new hemp cord. One end of this was tied to a telegraph pole, opposite a large tree.

"The next devil wagon that came along was a large yellow one, and Captain Dennis said he thought the driver was Paul Picard. He was running faster than the law allowed, and the rope was stretched from the telegraph pole to the tree and the man was signalled to halt.

"Instead of slowing up materially he drew a scythe blade from the bottom of the automobile, Captain Dennis says, and placed it in an arrangement on the front of his machine so the rope would just catch the lower end

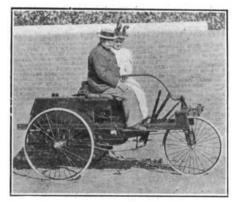
"Then this automobilist started the machine at full speed, and the lower end of the knife caught the rope. It drew tight, slipped up the knife blade a few inches, and parted. Then the victorious chauffeur, with his scythe blade, went on his way rejoicing.

"The whole thing was over before the policemen who were on the roadside realized what was happening."

One of the Pioneers.

Seven years is a long time as automobilists count, and the motor vehicle shown is therefore credited with being the first petroleum driven carriage made in England.

It was built by J. H. Knight, of Barfield, Farsham, and was first run in July, 1895. In October of that year he was brought before the bench and fined for using a loco-



motive without a license. The vehicle originally had a $3\frac{1}{2}$ inch cylinder and ran on three wheels. Later it was altered to a four wheel vehicle and had a larger cylinder fitted. It had two speeds, belts and jockey pulleys. It ran at the Crystal Palace Show of May, 1896. It was the only English car running, and it carried a red ensign in front.

Ten miles an hour was its maximum, but as it had spiral springs (not ordinary carriage springs) it was rather rough riding at that speed.

Registration Bureau for Mechanics.

It has frequently been the good fortune of the Automobile Club of America to institute new practices just at the right time. The inauguration of a register for mechanics, announcement of which was made on Saturday, comes just when the need for something of the kind is being most felt.

The register is intended for the protection of members, and it will contain, so far as possible, a list of eligible and reliable operators. To this end members are invited to send to the club secretary the name of their mechanic to be entered in the register, and should they have occasion to discontinue his services for cause they are requested to immediately notify the secretary, which information will be considered confidential. They are also invited to send the name of any mechanic whom they know to be a competent and trustworthy man.

DEALS WITH COST

Of Operation of Town and Country Service, Does This Belgian Contest.

A test that will be watched with interest by those interested in the development of the business motor vehicle is to be held by the Automobile Club of Belgium from the 23d to the 29th of October next.

The competition is to be international, and open to all automobile vehicles suitable for town purpose or suburban service. It will take into account the cost and expenses of a motor vehicle in daily service in Paris or in the suburbs, accomplishing a journey of sixty kilometres (thirty-seven miles) on a hilly road. The comfort and easy handling of the car will be taken into consideration, as also the number of times it needs to take in supplies, the extent of repairs required, and the facility of carrying them out.

There will be two sections-namely, town service and suburban service. The first section will include the following six classes: (1) Cars for two or four passengers without luggage, open or closed, or so constructed that they can be opened or closed at will. (2) Cars for four passengers and thirty kilos. of luggage per passenger. (4) Delivery wagons able to carry from 500 to 750 kilos., with one extra seat, (5) Cars capable of carrying from 300 to 500 kilos., with one extra seat. (6) Tricycles carrying 100 kilos., but with no extra seat. The second section will be divided into three classes, namely: (1) Omnibuses for ten passengers, with 30 kilos, of luggage per passenger. (2) Deilvery wagons capable of carrying 750 kilos., with one extra seat. (3) Lorries capable of carrying a ton.

In each section the cars must be completely finished with the usual carriage work employed for their class. The delivery wagons must have a van body containing at least a cubic metre of space for 300 kilos, one and a half cubic metres for 500 kilos. All the cars will be required to have at least one brake acting both ways, a sprag, and a reverse motion.

The entries, at the rate of 200 francs per vehicle, close on September 15th, but up to October 15th at midnight entries will be recelved at the rate of 300 francs. The trials will be watched by an observer for each car, and will last over six days, with one day's rest. For each section there will be two different routes, starting from and arriving at the A. C. F., in the Place de la Concorde, Paris, and passing through Versailles for the suburban section. The legal speed will be insisted upon throughout, and speeds on certain hills will be calculated. It will be seen by the above details that the competition will be a most interesting and instructive one





The automobile as an article of commerce and as a vehicle of pleasure and utility is an interesting subject to the majority of Hartford people. In the first place, it has been made here for a number of years, and in the second it already forms a considerable factor in the business and social life of the city, and few people doubt that it is destined to take a much larger place there. Among those who denounce most vigorously the nuisances and dangers to which they are subjected by the misuse of the automobile the discrimination is made that it is not the machine which is to be blamed, but the reckless and inconsiderate people who operate them. Here in Hartford we believe the automobile has come to stay, and we are only waiting the time when improved methods and means of construction will make it more reliable and place the cost of a good machine within the reach of the citizen of moderate means.—(Hartford (Conn.) Post.

Whether the automobile has come to stay or not, it has come to strive. And it is recognized-oh, yes, it is recognized. People who have been compelPled to dance before it, and have been driven into their sitting rooms when they have found it careening up the walk and trying to climb upon the veranda, and have been interrupted at prayer meetings and funerals by its whizzing and clanking and its output of perfume—they recognize it; but they do not always care to have it thought that they are on speaking terms. The automobile is doubtless a benefactor. People who have money enough rejoice in its possession. A new race has come into being in consequence of it—a race that builds and repairs, that stuffs tires with air and manufactures electricity and gasolene for its consumption, and seeks damages for clients whom it has downtrodden; likewise who manufacture goggles and diving dresses. Though the automobile has not yet become so general as the reformed loom and the rotary press, its disappearance would cause great lamentation in this race.

The automobile itself should be exempt from criticism, like locomotives and 12-inch guns. When a locomotive runs wild, or a 12-inch gun fires itself in the night and breaks an ocean liner, there is no reproach for the mechanism, but only for the people who should have been looking after it. An automobile sometimes gallops away unsent, and then the people who ride in it are just as anxious to have it stop as anybody else is, but more usually when one of these ma-

chines rips over the face of the earth at something less than a mile a minute, bowling over farmers, scaring hens into premature ovulation, and causing cats and cows to bound, with erected tails and projecting eyes, to the highest mountain tops, there is a motive for the speed, and the motive is the man at the lever.

Hence we are beginning to exact new laws for the control of the man. And he needs them, for the automobile appears to make enemies as fast as it makes friends.—(Brooklyn Eagle.

The local authorities will be compelled to regulate the use of automobiles. Drivers are so indifferent to the rights of the public that life is daily imperilled. The owner of each make of machine seeks to outspeed a possible rival, and spectators are daily treated to bursts of speed on the crowded streets that are simply intolerable. The "autos" apparently act on the hypothesis that people must look out for themselves. Saturday night there were notable examples of the disregard of public safety.

It has been suggested that every automobile be required to carry a license tag so conspicuously displayed that it can be seen. The owner could thus be traced, and some hold could be secured on men indifferent to the rights of the ordinary public. There have already been numerous accidents, fortunately unattended with loss of life, and incidents can be had by the score where serious results were avoided by the merest scratch.

It is said that the auto drivers feel themselves ilcensed to take extraordinary risks because the City Council has "repealed" the State law and fixed the legal rate of speed at ten miles an hour. Not since the late Mayor Macaulay overruled a decision of the Supreme bench in a wife whipping case has a subordinate legislative body set aside rulings of the highest judiciary. In this particular instance, the law was "repealed" to benefit the electric line service. None of the electric cars are "geared" at less than eighteen miles an hour, and the time card calls for an excess outside of Washington street. Ten miles an hour, however, is too tame for the "autos," and the electric line is a slow coach compared with this new rapid transit.

There is, however, some chance to dodge the electric car, as it is confined to a single track, accompanied with a sounding gong and rattling wheels, giving notice of its approach. But with the noiseless, gum shod automobile, sneaking along at a gait often in excess of twenty miles an hour, there is no such warning. Without restriction it is a menace to the public safety, and that there will be loss of life if the police do not interfere is almost certain.—(Indianapolis (Ind.)

The suggestion made by General Roy Stone in his letter in The Tribune of July 21 is being acted upon in some places with good results. Horses are being systematically trained to regard automobiles without fear. This is being done through amicable co-operation between motormen and horsemen, and is recognized by both to be to the advantage of both. It will be well for the movement to be extended, through individual adoption and through the organization of veritable "schools" for the purpose on a large scale. Thus life will be made more agreeable, the use of the roads by horsemen will be made safer, and much unpleasantness and friction between the users and occupants of the two classes of vehicles will be avoided.

There is no doubt that the great majority of horses can quickly and easily be freed from fear of automobiles. There are few animals in the world as observant, as reflective, as intelligent and endowed with something so closely resembling human reason as the horse. There are none more easily taught or which more tenaciously retain and unfailingly practise that which they have learned. Some horses, it is true, are hopelessly ignorant and vicious, almost as much so as some of their drivers. Such it might be well to put out of the way, mercifully but irrevocably-something which unfortunately cannot be done with some of the drivers. In the great majority of cases horses are frightened or are fractious simply because they are untrained, or, worse still, ill trained. The man who in "breaking in" a colt does not train it not to take fright at objects which it may encounter is guilty of grave omission. The man whose only idea of training a horse is to yell at it, saw its mouth with the bit and flog it with the whip, and who instantly does all these things the moment the animal shows a bit of aervousness at a strange object, is a fool, whose experience with horses should be strictly confined to those of the wooden variety known among army disciplinarians as the timber mare—several hours a day, with weights on his feet!

The training of horses to regard automobiles with equanimity is, therefore, a highly commendable and most promising undertaking. Nevertheless, we hold these facts to be self-evident, that the automobile which reeks of gasolene, or which makes a noise like a banshee wailing over a jigsaw, is a nuisance which should be banished from the surface of the earth, and that the automobile which "scorches" at an excessive rate of speed is a menace to life and limb which should not be tolerated upon a public highway. If there were no such things as horses, or if all horses were immune against fear, we should still object to machines which offend the nose and ear and which transform the highway into a racecourse.— (New York Tribune.

Recent Incorporations.

New Concord, Ohio.—The Steel-Mobile Co., with \$50,000 capital, \$40,000 paid in, to manufacture automobiles. Incorporators, H. L. Warner, Dayton, Ohio; J. M. Ickes, Newark, Ohio; D. S. Burt, Byesville, Ohio; L. C. Taylor and John S. Black, Cambridge, Ohio.



TRIALS AT LAFFREY

High Hills in Neighborhood of Grenoble, France Conquored—Origin of Contest.

In addition to having been carried out on grades of exceptional severity, the hill climbing contest at Laffrey, near Grenoble, France, was made even worse by a heavy rainstorm, which considerably damaged the road, the rain and fog having made it sodden and muddy.

Laffrey is situated on the slopes of the Alps, near the town of Vizille, and is the most suitable hill for a competition of automobiles which has yet been discovered in France. It has a total length of four miles, with an average of 9.3 per cent of slope. Beginning at Vizille with 4.6 per cent, it passes quickly to 7 and 9 per cent, and reaches as much as 12.8 per cent. There is more than a mile of 10 per cent gradient. The road is straight and wide, with no dangerous turnings, and there are no level parts. The motor was thus hard at work all the time, and the test is most severe.

The trials were organized for the first time last year by the Automobile Club of Dauphinois, the winner being a Georges Richard. In an interesting article published in La Locomotion, M. M. P. Laveine, of the Automobile Club of Dauphinois, explains the origin of the trials. It seems that for years motor cars were supplied which were quite incapable of negotiating the hills abounding in the neighborhood of Grenoble, and whenever this was explained to the Paris automobile manufacturers it was not credited, the reply being always given that, having proved their efficiency at Chantloup, the Redillon de Tuileries, Gaillon and other hills in the neighborhood of Paris, the cars would certainly negotiate the Alps, an assurance which was not justified by subsequent events. The Alps are no respectors of motors, and in the region in question there are plenty of hills of 12, 15 and even 18 per cent. which often occur after long stretches of less steep ascent.

"The hills," says M. Laveine, "we could only crawl up at the rate of four or five miles an hour, and we felt ourselves lucky if we could climb them at all. This is why we organized the hill climbing trial of last year, and we chose Laffrey because it is a steady pull all the way up, without giving the motor any rest."

There were six classes for motor cars, and one for motor bicycles, namely: (1) volturettes up to 400 kilos., (2) light cars under 650 kilos., (3) cars under 1,000 kilos., (4) light tourist cars, (5) heavy tourist cars, (6) motorlorries, (7) motor bicycles. There were fifty entries, including Serpollets, Clements, Mercedes, Peugeots, Darracqs and Rochet-Schneiders.

The race took place at 7 o'clock in the morning, one minute being allowed between each competitor. The weather was fine, but

the roads had been drenched with rain the night before and were really in a shocking condition, causing frequent sideslips, which fortunately in one case resulted in accident. A great many Parisian chauffeurs were present, and, of course, all the disciples of automobilism from the neighborhood of Lyons.

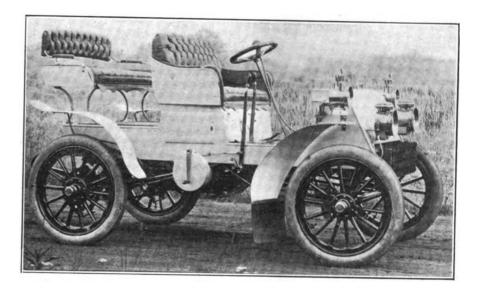
In addition to the prize for the winner of each class, a special one was offered to the car which made the best time on the second half of the hill. This very ingenious idea was put forward in order to show the superiority of the motor which worked best after having made a considerable and prolonged effort, and here M. Leon Serpollet was easily the master of the situation. The best time was done by an amateur, M. Armand Mauselin, on a 20 horsepower Darracq, who negotiated the four miles in ex-

PRESIDENT'S OWN CAR

This Packard was Designed by and for Ohio Company's Chief Official.

In designing the car shown in the accompanying illustration, President J. W. Packard, of the Ohio Automobile Co., had a most pleasant task. It was intended for his own use, and as he is an ardent automobilist this meant a great deal. Consequently the car contains some unusual features. More than one of them is likely to be seen on the 1902 Packard models.

The car is substantially the 12 horsepower, Model F, Packard, but with an arrangement of seats after the style at present becoming popular in France.



actly ten minutes, M. Serpollet coming in just six and one-fifth seconds after him. This constitutes a triumph for automobile progress, for last year's record was sixteen minutes twenty-three and tw-fifths seconds.

At a Mile a Minute Pace.

How it feels and looks when going at sixty in the hour is thus graphically described:

"In the first place, the air seems to strike your face in a solid mass, pushing the fleshy part of the cheeks back and giving one a very clear idea of its resistance to high speeds. In the second place, a look behind is very curious. For about ten or twenty yards there is no particular dust except two thin streams, which look like rivulets rushing away from the car; gradually they widen, rise and begin to curl, and finally join together in an opaque screen, which hides everything from the view, and is truly awful in its consequences. It is like the sandstorm in the desert, where the traveller must get off his camel and cover his face. The future will have to solve this dust terror, which must be banished, and will be, I have no doubt."

The rear seat is very comfortable, and on account of its construction saves much unnecessary weight, and is just as strong as though resting on built up woodwork. The peculiar design of this vehicle lends itself particularly to the requirements of touring, for a strong brass finished railing takes the place of the easily detached rear seat, and a very large amount of baggage can then be safely carried on the flat rear end.

A new departure in this vehicle is the adoption, after a long series of tests of two inch hollow steel axles running on bearings, consisting of seven-eighths inch steel balls. Each axle has a one inch hole running through its entire length.

The hub brakes are of new design, double acting and very powerful, capable of locking the rear wheels when the carriage is at speed. There is in addition a very effective single acting brake on the end of the transmission shaft, operated by throwing the clutch lever forward.

The transmission is the same as on the Model F, giving three speeds ahead with but two gears in mesh at any time, and a reverse. The method for shifting the gears is the well known Packard plan, which makes

it possible to shift from the high speed to the reverse, or any other gear, without passing through the intervening speeds.

Eight of the principal bearings are oiled automatically by a pump, which, being operated by the engine, always feeds in proportion to the engine speed and stops with the engine. The gears are contained in an aluminum case, and run in a bath of heavy oil.

Jump spark ignition is used, with the timing of the spark under the control of a centrifugal governor. This causes the ignition to occur earlier with each increase in engine speed, and accounts for the great rapidity with which the engine will go from minimum to its maximum speed (850 r. p. m.).

The carburettor is of the float feed, pulverizing type, and once set gives a uniform mixture for all variations of engine speed. The fenders are of aluminum, painted and striped to match the body.

The steering is by worm and segment, with a special cushioning device for relieving the worm of the shocks produced on the wheels by bad roads.

By one who Knows.

"People are not quite accustomed to the grime of automobiling; they tolerate the dust of the golf links, the dirt of baseball and cricket, the mud of tootball, and would ridicule the man who failed to dress appropriately for these games, but the mechanic's blouse or leather coat of automobiling, the gloves saturated with oil-these are comparatively unfamiliar sights; hence men are seen starting off for a hard run in ducks and serges, sacks, cutaways and even frocks, and hats of all styles. Give a farmer a silk hat and patent leather boots to wear while thrashing and he would match them," says A. J. Eddy in his book, "Two Thousand Miles in an Automobile."

"Every sport has its own appropriate costume, and the costume is not the result of arbitrary choice, but of natural selection. If we hunt, fish or play any outdoor game, sooner or later we find ourselves dressing like our associates. The tenderfoot may put on his cowboy suit a little too soon, and look and be very uncomfortable, but the costume is essential to success in the long run. The Russian cap so commonly seen is an affectation—it catches the wind and is far from comfortable. The best head covering is a closely fitting Scotch cap.

"It is one thing to own an automobile, another thing to operate it. It is one thing to sit imposingly at the steering wheel until something goes wrong, and quite another thing to repair and go on.

"There are chauffeurs and chauffeurs—the latter wear the paraphernalia and are photographed, while the former are working under the machines. You can tell the difference by the goggles. The sham chauffeur sits in front and turns the wheel, the real sits behind and takes things as they come; the former wears the goggles, the latter finds sufficient protection in the smut on the end of his nose."

PLOW FOR GATLING

Celebrated Inventor's Motor Plow to do Work of 15 Men and 30 Horses.

It is the intention of Dr. R. J. Gatling, of St. Louis, the inventor of the famous Gatling rapid fire gun, which did so much to revolutionize the system of modern warfare, to shortly place on the market a motor plough. With it he expects to reduce the cost of ploughing to one-quarter of the present figures, and to do with one plough the work of fifteen men and thirty horses. When it is not in use as a plough, it can be utilized for any of the purposes to which an ordinary traction engine is put.

"From the time to which the memory of man runneth not," says Dr. Gatling, rather grandiloquently, "ploughing of the land has been the most important, as well as the most laborious and expensive part of the farmer's work, and less progress has been made in improving the methods and cheapening the cost of ploughing and preparing the land to plant the seed than in any other branch of farm industry. Many years ago the cradle took the place of the sickle, and that was later driven out of the field by the reaper, which, after a short but useful career, was replaced by the self-binding harvester, and each in its newer and better methods cheapening the the cost of producing wheat, the great exporting grain crop of the United States.

"During all this time, while the methods of harvesting the crop were being so much bettered by introducing labor saving machinery, very little progress has been made toward cheapening the cost of preparing the land for the seed; we have seen the ocean ploughed by the steamship carrying its thousands of people and millions of tons of freight from one continent to another; the steam traversed railroads carrying their thousands of passengers and millions of tons of produce from the Atlantic to the Pacific oceans; the horseless streetcars and the horseless wagons plying our streets in every city; but the farmer and ranchman are still turning the soil in the same old way our forefathers used to do, with ploughs drawn by horses.

"The Gatling motor plough consists of a motor truck, driven by a gasolene engine, of sufficient power to propel the ploughs at any desired depth down to twelve inches. The truck is built similar to those trucks used with traction engines, except that the steam boiler is replaced by a strong platform, on which is placed the gasolene engine which is connected to the traction gearing by a series of gear wheels; to this truck is attached a set of disc ploughs, which may be set to run at any desired depth, or any angle

needed to give the best results when ploughing.

"With this machine it is estimated that one man can plough from thirty to thirtyfive acres in one day. To plough this number of acres in one day with the ordinary moulboard plough would require fifteen men and thirty horses; so, when it comes to cultivating one of our large Western farms it is easy to estimate the large drove of horses and the great number of men required to do the ploughing, and the immense cost to the owner to house and feed them. Since the furnishing of Europe with a large part of their breadstuff has become one of the most important features of our commerce, we find that, in order to sell our wheat in the foreign market, we are compelled to compete with the cheap labor of India, the Argentine Republic and other countries, and the only way to do this successfully is to cheapen the cost of producing the wheat, and this we find can readily be done by the use of the Gatling Motor Plough.

"It is generally estimated that the cost of ploughing under ordinary conditions is \$150 per acre, and then the further preparation of the ground by harrowing and rolling it costs another 50 cents per acre. By the process of ploughing with the Gatling Disc ploughs the ground becomes thoroughly pulverized, and the rolling is not required. A harrow attached to the machine will do the smoothing, and a seed drill attached behind this will do the seeding, so that the ploughing, harrowing and seeding may all be done with one passage of the machine, and at just about one-fourth of the cost of the present methods, thereby lessening the cost of production to that extent, which will enable the wheat grower of the United States to compete in the markets of the world, with a profit to himself.

"The ploughing of the land and seeding will not be the only use to which this machine may be put. When the ploughs are detached, it can be used to do any of the work to which an ordinary traction engine is used, such as running a threshing machine, a sawmill, grinding feed, pumping water or hauling loads on the road. By using a gasolene engine, instead of a steam boiler, the machine is made much lighter than an ordinary traction engine, having the same pulling power; hence, it is better adapted to the various uses to which it may be put. With the introduction of this machine on the large farms of the West the farmer can dispose of the larger number of his horses and mules and the vast quantities of forage which they annually consume can be sold, to add to the profits of the farm. These machines are to be built in St. Louis to supply the great demand for the same."

Until the plough has been fully tested, Dr. Gatling writes to the Motor World, he does not desire any description of it in detail made. It is being further improved, and patents in addition to those already taken out will probably be applied for.

TWO STEARNS CARS

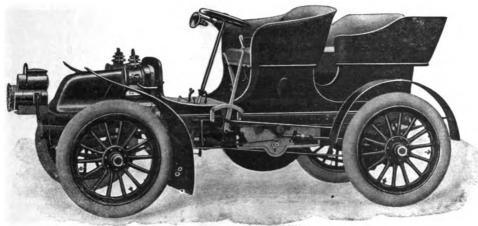
Touring and Surburban Types—Some of Their Particular Features.

In their touring and suburban cars the F. B. Stearns Co., Cleveland, O, have turned out two extremely taking looking vehicles. In appearance they strongly resemble the so-called French type; nevertheless, the characteristics which have distinguished

positive steering device, assures easy control and absolute safety under all conditions.

The suburban car is equipped with a well balanced single cylinder motor of 11 horsepower (brake test). The transmission gear has two speeds forward and one reverse, all contained in a dust proof case and running in oil. Direct connection is made with the rear axle by roller chain to spur gear differential, and no gears are operated when using the high speed clutch.

Perfect lubrication is assured by a force



Stearns cars in the past have been adhered to almost without exception.

The touring car model is equipped with a perfectly balanced, double, horizontal (opposed) cylinder motor of 20 horsepower (brake test), suspended on a channel iron frame, with low centre of gravity and the weight carefully and evenly distributed. The frame is mounted on Baker ball bearing axles, front and rear, fitted with artillery wheels and detachable tires. All working parts of the motor are as readily accessible as in the vertical type, even with the body in position, and are kept thoroughly oiled by a force feed oiler that assures perfect lubrication for 150 to 200 miles running.

Only one atomizer is used, which never fails to perform its functions. The sparking device has been demonstrated to be both practical and reliable, two batteries or a generator and one battery supplying the current.

The transmission gear, having three speeds forward and one reverse, all inclosed in an oil tight dust proof case, is direct connected by roller chain and spur pinion differential to a tubular rear axle. A radius of speed may be obtained of from five to forty-five miles an hour with regular equipment; racing sprockets may be attached for greater speed, the equalizing gear being made with detachable split sprocket. All grades up to 15 per cent are negotiated on the high speed, the intermediate and low gears being used when conditions demand.

Gasolene and water tanks with capacity for 150 to 200 miles are placed in front under the hood. Two sets of brakes, one acting on wide surface flange on the rear wheels, the other on the equalizing gear, together with a long wheel base and low centre of gravity

feed oiler, and absence of heat by large water jacket and a reliable radiating system. The running gear is made of channel iron mounted on ball bearing axles and artillery wheels equipped with detachable tires-a

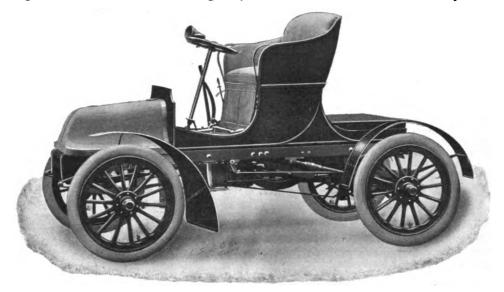
GRANTS TWO SPEEDS

Denver Automobilists Gain a Substantial Victory and Reasonable Rules.

A substantial victory has been won by Denver, Col., automobilists. They have persuaded the councilmen to fix the maximum speed of motor vehicles at eight and fifteen miles an hour, respectively, in the congested and outlying streets, as well as to agree to other reasonable rules.

An ordinance has been drawn up and approved, and it seems certain of passage. Its provisions follow:

Section 1. It shall be unlawful for any person to ride or drive any automobile, motor-cycle, locomobile, steam or gasolene wagon, or other vehicle or conveyance for the carriage of passengers or any commodities, other than those drawn by horses or other animals, within the corporate limits of the city of Denver, at a rate of speed greater than fifteen miles per hour, or upon the streets within the district bounded by the exterior lines of Broadway, Nineteenth street, Wazee street, Fourteenth street and Colfax avenue, or upon Larimer street between Cherry Creek and Downing avenue, to ride or drive any such machine or vehicle at a rate of speed greater than eight miles an hour, or within said district to pass any street intersection or to turn any corner



assuring easy riding, and positive steering device and double acting band brakes on rear axle absolute safety.

Getting Ready for Brighton Beach.

Foxhall P. Keene has returned from Europe and may compete in the Brighton Beach races on August 23. F. S. Dickinson ran over from Trenton the other day and reported that the Howard steam racer would forego a straightway trial on the road for the present and, instead, would make the first public showing of its fast pace in the L. I. A. C. track races.

when any pedestrian or vehicle is near, or to ride at any such street intersection or corner or at any place where any person may be entering or leaving any streetcar at any street intersection, to ride or drive at a rate of speed greater than is compatible with public safety, amount of travel and traffic considered.

Sec. 2. Owners of any vehicle or vehicles mentioned in this act shall obtain such numbers from city treasurer, sign to be 8x4 inches, or thereabouts, as provided by said treasurer; they shall pay a fee of \$1 for



same, and shall register with the city treasurer their names, addresses and numbers; and they shall conspicuously display said signs on the rear of their vehicles.

Engines attached to any of said vehicles shall not run idle, or while the vehicle is at a standstill, for a greater length of time than five minutes.

Sec. 3. Any violation of any provision of this act shall be punishable by a fine of not less than \$5 and not more than \$100.

To Providence and Return.

Although intended primarily for track racing, the big Cannon steam car is well able to take care of itself on the road also. It recently made a fast trip from Boston to Providence and return, covering good roads and bad alike without trouble.

"I inclose a table of the distances and time made to and to Providence, R. I., from Boston, Mass., on Saturday, July 26, 1901, in my 10 horsepower steam car," writes George P. Cannon to the Motor World.

"At no time during the run could I 'let her out,' owing to my inability to see very far ahead, and consequently being unable to tell whether I had a clear road or not.

"I have deducted the time occupied in taking water and gasolene, for which I was compelled to stop twice each way, owing to the small capacity of the tanks on the machine, they being only intended for track use.

"No accident occurred during the entire trial, and I feel very much pleased to find that a machine which was originally intended for track use only could travel one hundred miles (approximately) in three and one-half hours.

"The steam during the run was maintained at between two hundred and three hundred pounds with great ease.

	\mathbf{Time}	Time
Dis-	down.	back.
tance.	H.M.S.	H.M.S.
Boston to Dedham11	0:35:00	0:27:00
Dedham to Norwood 5	0:10:00	0:09:30
Norwood to Wrentham. 5	0:10:30	0:10:00
Wrentham to Walpole 71/2	0:16:00	0:10:15
Walpole to North Attle-		
borough 7½	0:17:00	0:12:00
North Attleborough to		
Pawtucket 8	0:17:00	0:16:00
Pawtucket to Provi		
dence 41/2	0:14:00	0:11:00
Totals	1:57:30	1:35:45

Prepared by Packard.

"One minute of earnest thought will accomplish more toward locating any trouble you may have than one hours of crank hustling."

This gem forms the introductory paragraph of "Packard Pointers," a litte pamphlet just issued by the Ohio Automobile Co., Warren. O. For fifteen pages it goes on, giving advice on pretty nearly every matter that can come up, being written, of course, from the Packard standpoint.

No instruction is too obvious or too minute to be overlooked. Everything is there. The user who follows the advice so generously given will be pretty certain to locate the cause of his trouble.

LIGHT ROADSTER FRANKLINS

Equipped With an Coiled Motor and Conveniently Operating Devices,

An interesting feature of the Franklin light roadster automobile, made by the H. H. Franklin Mfg. Co., Syracuse, N. Y., is the fact that the engine is air cooled. As to the success of this feature there is stated to be absolutely no question.

Another feature of the car is its stability over rough roads. The amount of banging it stands without anything breaking or getting out of order is remarkable. This is due largely to the perfect design and proportion of all parts.

The speed of the engine is very moderate—amounting to only 700 feet of piston speed at twenty-five miles an hour. Of course, in the normal operation of the engine it is al-

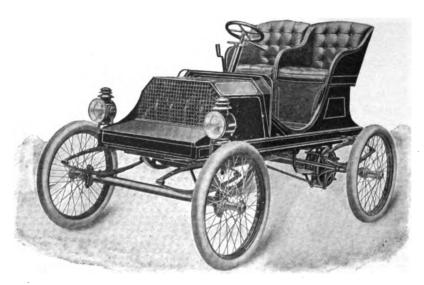
nary single seat. Wood wheels are also fitted.

A light tonneau car, to weigh about 1,250 pounds, with the same engine, water jacketed, is also being made. This will have a somewhat longer wheel base, and the tonneau will be detachable, so as to make a powerful touring car if so desired.

The Franklin Co. are also building a much heavier tonneau with powerful four-cylinder engine. This engine will have the same simplicity and the same ease of control as the smaller engine. It will weigh about 2,500 pounds, and will be capable of any speed, uphill or otherwise, that any one could desire. The size of the engines in this wagon are 5-inch stroke and 5-inch bore.

Climbed up Mont Cenis.

On July 27 a competition organized by the Stampa Sportiva, of Milan, took place, starting outside the little town of Suse, right up to Grande Croix, the celebrated shelter of



ways throttled down much below the maximum capacity, this maximum capacity being only called upon for the severest hills and the highest speed. The power is such that very steep hills may also be mounted at a medium rate of speed, seven or eight miles an hour, if wished for.

It is claimed that the car runs very quietly. All normal running is done on the high speed gear, from five miles an hour up to the limit of the speed of the vehicle. This is made possible by the four cylinder engine and by the special carburetter.

The throttle and ignition advance levers are arranged on each side of the steering post in convenient position for the hand. The change speed lever is located at the side of the vehicle, forward position giving the fast speed and the rear position the slow speed. The brake is located convenient to the right foot, and the backup is located convenient to the left foot. This releases itself, and can be used as a brake in descending steep hills.

The bodies are made with individual or racing seats, as shown, and with the ordi-

Mont Cenis, a distance of twenty-three kilometres (about fourteen miles). A large crowd witnessed the start, and the results in the racing section were as follows:

Voiturettes—First, Ceirano 7 horse Ceirano), 41 min. 48 3-5 sec.; second, Ceirano (7 horse Ceirano), 52 min. 36 3-5 sec., and third, Charles (8-horse Darracq), 1 hour 6 min 25 2-5 sec.

Light cars—First, Storero (12-horse Fiat), 31 min. 33 sec.; second, Krautler (16-horse Peugeot), 31 min. 49 sec., and third, Hemery (20-horse Darracq), 36 min 46 2-5 sec.

Heavy cars—First, Lancia (24-horse Fiat), 30 min. 10 2-5 sec.; second, Renaux (30 horse Peugeot), 31 min. 21 sec., and third, Tourand (20-horse Brouhot), 42 min 15 1-5 sec.

(20-horse Brouhot), 42 min 15 1-5 sec.

The Challenge Cup given by Princess Lectitia for the car doing the best time, irrespective of class, was therefore won by Lancia on his 24-horse Flat.

The Week's Exports.

Copenhagen—4 cases motor vehicle parts, \$250.

Ecuador—13 cases motor vehicles, \$2,651. Hamburg—1 case auto vehicles, \$145. Havre—9 cases motor vehicles and parts, \$11,532.

London—24 cases auto vehicles, \$13,890. Liverpool—1 case auto vehicles, \$1,500.



INGRESS AND EGRESS

Both Made Easy for Imported Cars—Deposit in Lieu of Duty.

A still further letting down of the tariff bars has been made by the Treasury Department in the case of imported automobiles. A recent ruling of Secretary Shaw permitted such cars to be brought here duty free when they were intended to remain only temporarily, a deposit of the amount of the duty being required, which is refunded when the car is taken away.

Last week Secretary Shaw made another important ruling regarding automobiles and other articles of foreign manufacture, which, having been imported, are taken abroad by their owners and brought back to the United States again.

The question was raised by an automobilist of New York, who wrote to Secretary Shaw asking for a ruling on his case.

After consideration the Secretary has decided that the privilege of free re-entry may be properly allowed to all articles of foreign manufacture or production under proper safeguards for the protection of the revenues, provided the articles so admitted shall not have been advanced in value or improved in condition while abroad. The article is to be registered, with full description, at the custom house on exportation, and a certificate issued to the owner, and on its return must be fully identified as the article exported. The Secretary has issued instructions to the Collector at New York in accordance with this decision. Heretofore the department has held that no matter how many times an article of foreign manufacture was brought into this country it must pay duty each time.

Duryea Revises Price List.

A revised price list has been issued by the Duryea Power Co., Reading, Pa. It covers five of the eight patterns the concern proposes to build, and with one exception, that of the three-wheeler, the prices all show a slight advancement over the old ones.

Coming to New York.

T. J. Wetzel, of the old firm of McCutcheon & Wetzel, Chicago, will this month open an office in New York and act as manufacturers' agent for a number of well known concerns. Among the latter are the Midgely Mfg. Co., Columbus, O.

Will Make Gasolene Cars.

Work has been started on a two-story brick building to be used by the Steel-Mobile Co., of New Concord, Ohio. A gasolene automobile, designed by H. L. Warner, will be manufactured. It is hoped to be in operation by October 1.

An automobile store has been opened at 33-37 East Fifty-eighth street, New York, by Leon Schermerhorn, who will act as agent for the Cleveland automobiles,

Got out an injunction.

Consternation was created among English automobilists by the compulsory change in place and date of the Bexhill races. It appears that a small portion of the land fronting on the road selected for the races was owned by a man who was at loggerheads with Earl De la Warr, the motor enthusiast and principal owner of the property. The former asked for and obtained a perpetual injunction against the races, and thus effectually blocked them. The matter will be fought out in the courts. Meanwhile permission was obtained from the Duke of Portland to run the races at Welbeck Park, last Thursday being the date selected. On Friday a hill climbing contest on Dashwood Hill, was to have been held.

Will Select Race Meet Date.

The board of governors of the Rhode Island Automobile Club are expected to meet some time this week for the purpose of making arrangements for the race meet to be held at Narragansett Park. The meet cannot be held before the latter part of next month, and it may possibly not take place until October. Many of the club officers are now out of town, and there was not a quorum present at the gathering last week.

To Shut Down for Stock Taking.

The Waltham Mfg. Co. Waltham, Mass., will shut down their plant for one week for inventory. The company's business for the past season has been the best in its history, and arrangements are now being made to enlarge the plant by installing new machinery. The demand for automobiles and other goods of the company's manufacture has been beyond anticipation.

Air-Cooled Motors to be Used.

It is the intention of the Fanning Mfg. Co., Chicago, Ill., to shortly place on the market a new vehicle driven by an air cooled motor, the latter having aluminum radiating flanges vertically inserted in the cylinder. A motor possessing these features has been in use for the last two years, and has demonstrated itself to be thoroughly efficient, the Fanning Co. write.

Upton Co. to Move.

The plant of the North Shore Lumber Co., at Beverly, Mass., has been purchased by the Upton Machine Co. The latter will remove at once, doubling its capacity and employing 250 hands.

Holding Annual Conference.

The Hartford Rubber Works Co. are this week holding the annual conference of the executive officers, branch managers and travelling men at their factory, in Hartford, Conn.

At Belleville, Ill., last week a programme which included several automobile races was parried through successfully.

NEWARKS BLUE LAW

Eight Miles an Hour the Maximum and Many Needless Restrictions.

Although it is still to be officially passed by the Board of Freeholders, an automobile ordinance has been drafted at Newark, N. J., and seems altogether likely to become a law. It is lengthy, and hedges automobiles around in a most aggravating manner. To cap the climax, the maximum speed is placed at eight miles an hour, a rate admitted to be absurdly low.

The ordinance prohibits any one from running an automobile at a greater rate of speed than eight miles an hour on straight roads, and four miles an hour around corners, under a penalty of \$10 fine for the first offence and \$25 fine for the second offence. It also calls for a light on each machine at night, which can be seen ahead for a distance of 100 yards. The lamp, or lantern, must be lighted one hour after sunset and one hour before sunrise, if there are any enthusiasts who wish an early morning spin. For violating that section in the ordinance a person will have to pay a penalty of \$5 for each offence.

Automobilists are also commanded to blow a horn or whistle or ring a bell when approaching any pedestrian or vehicle, which shall be heard 100 feet away, under a penalty of \$5 fine. They must also keep to the left when passing any other vehicle, and take all precautions to avoid accidents under another \$5 penalty. Another \$5 fine is imposed on the automobilists if they loiter in the streets and in any way interfere with traffic.

The ordinance further calls for the registering of all automobiles, motor cycles and similar vehicles at the office of the County Clerk before such machine shall be used on the public highways. The registry will contain the full name and address of the owner of the machine, who will be given a number. which must be painted on the back of the machine. Any machine without a number will be stopped by the police and the chauffeur arrested. In every case of this kind the owner of the machine will have to pay a penalty of \$10. In cases of transfers of machines the purchasers must apply to have their names changed to the number under a penalty of \$10 fine.

Automobilists are also compelled under a \$10 penalty to stop and exchange names in cases of accidents and to stop whenever any driver of a frightened horse raises his hand.

New Plant Running Full.

The removal of the International Automobile % Vehicle Tire Co. has been successfully accomplished, and the company is now installed in its new factory at Milltown, N. J. It has the solid rubber and pneumatic tire departments in working order, and is in a position to take care of orders.



Thought he was Guyed,

Amusing, even if somewhat embellished, is the excuse given by a Brooklyn automobilist last week when arraigned after arrest for violating the speed law.

"Last night was the first time I had the machine out," he said, "and I went slowly. Once a young man ran in front of the machine and cried, 'Stop!' I stopped, and then he said: 'Say, do you know your wheels are going 'round?' That made me mad, your honor. Afterward another man jumps in front of me. Says he: 'Get a horse,' and that made me mad again; so I thought I would go a little faster, and when the policeman held up his hand I thought he was 'guying' me because I was going slow."

"Five hundred dollars for trial," the magistrate remarked.

Mueller is a die sinker by trade, and he lives at No. 29 South Third Street, Brooklyn. For three months, he said, he had worked at home eight hours a day building the machine. He said he had formed no idea of its speed, excepting that when arrested the machine seemed about to leave the earth. In default of ball he was sent to jail.

Tires of the Bennett Cup Winner.

An exhibition of the tires with which the Napier car, winner of the Bennett Cup, was shod were placed on exhibition in Loudon recently and viewed by many people. The covers were placed in state amid bright colored plush surroundings, and each was labelled with a card describing it.

The two front covers are in an excellent state of preservation, showing but slight traces of the arduous journey they underwent; but the driving wheel tires, as might be expected, bear evidences of the harder work they had to do. The right hand driving wheel is in the worst condition, the rubber treads being worn through completely round, and in several cases no less than two plies of the canvas are also worn through, as the result, Edge explained, of his brakes having been unevenly set, so that when descending the Arlberg Pass the right hand wheel repeatedly locked and skidded along the road so as to tear the tires.

The left back wheel has a bad gash, which must have been done by a broken bottle end, which goes completely through the whole cover, exposing a small piece of the tube, notwithstanding which, this, like the other tires on the car, went through the whole journey from Paris to Vienna without a puncture.

May be Tried Abroad.

Sending horses to school to accustom them to automobiles is to be tried in England. The parks and gardens committee of the Liverpool corporation is considering a suggestion made by a townsman, with a view to obtaining an open space at Sefton Park for the purpose of training horses to the proximity of motor cars. The idea seems to be regarded with favor.

Tonneau Body Derivation.

The word "tonneau," often used in describing the body of an automobile, is French, of course, and means a cask. It is applied to those round carriage bodies seating two. four or six passengers which are seen on many motor vehicles, particularly those of foreign make. While most American makers have followed the foreign style to the extent of manufacturing bodies of this shape, usually removable, some of them decline to do so on the ground that the tonneau is dusty and uncomfortable, and on account of its position over the rear axle subjects the passengers to an uncomfortable jarring and vibration. On behalf of the tonneau it may be said that it gives a larger seating capacity than is possible in any other form of construction.

The Reflex Water Gauge

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The only water gauge of this kind.
The genuine article.

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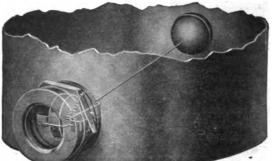
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Front Hubs are Ball-Bearing and are assembled on our well-known Steering Axles. Rear Hubs furnished with Ball-Bearings or Key-Seated.

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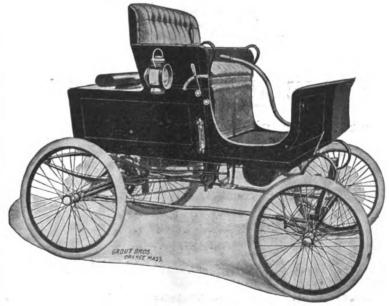
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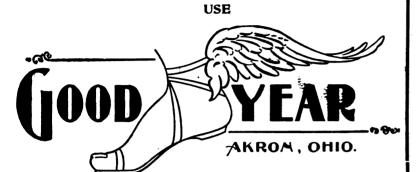


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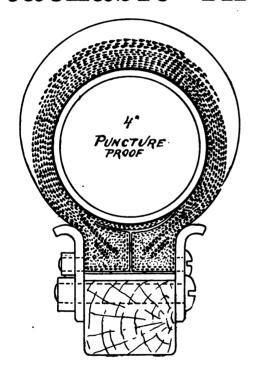
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"When puncture comes, pleasure departs and profanity follows."

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The company offers to sell a limited number of these 6 per cent. Gold Bonds, of the par value of \$100 each at Ninety Dollars, together with a bonus of one share of stock of the par value of \$100.

In case of an oversubscription, Company reserves the right to issue bonds pro rata or refuse subscriptions, as it may determine.

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The Week's Patents.

706,021. Device for Inflating Pneumatic Tires. Frederick W. Claesgens and John G. Magin, Rochester, N. Y., assignors of onethird to George A. Claesgens, Rochester, N. Y. Filed Feb. 15, 1902. Serial No. 94,280. (No model.)

Claim.—1. In a devise for inflating pneumatic tires, an air bulb having discharge valve at one end, a head holding the other end and having a chamber with side opening, a stopper having an opening, a cage adjustable in a cavity in said opening of the chamber in the head, and a valve mounted in said cage and fitted to a seat in the bottom of said cavity, all substantially as shown and described.

706,050. Mixing Valve for Gas or Gasolene Engines. Roy E. Hardy, Detroit, Mich., assignor, by mesne assignments, to Hardy Motor Works, Limited, Port Huron, Mich., a Corporation of Michigan. Filed May 6, 1901. Serial No. 58,864. (No model.)

Claim.—1. In a mixing valve for gas or gasolene engines, the combination with a casing of a mixing chamber for either gas and air or gasolene and air having a seat, a valve for the seat, air inlet ports controlled by said valve, a valve controlled gas inlet opening below the seat, a valve controlled gasolene inlet opening projecting in proximity to the main valve and having a seat formed at its upper end, and a secondary valve carried by said valve adapted to seat against said inlet opening.

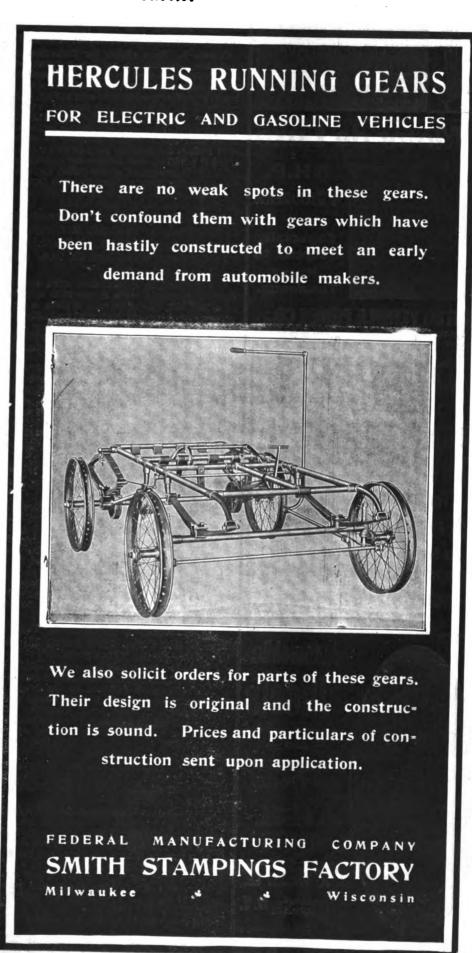
706,051. Automobile Air Pump. John G. Heal, Detroit, Mich. Filed Sept. 24, 1901. Serial No. 76,346. (No model.)

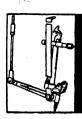
Claim.—1. The combination of a driving axle, a crown cam mounted thereon, an air pump fixedly located perpendicularly to the plane of the came wheel, the pistol rod thereof engaging the cam and actuating the piston of the air pump to compress air therein, elastic means for retracting the piston and the piston rod, a clamp adapted to frictionally engage the piston rod, and means connected with the clamp operated by hand whereby the clamp can be brought into engagement with the piston rod at the will of the operator, substantially as described.

706,081. Friction Clutch. Louis P. Mooers, Cleveland, Ohio, assignor to the Peerless Mfg. Co., Cleveland, Ohio, a corporation of Ohio. Filed Oct. 30, 1901. Serial No. 80, 486. (No model.)

Claim.—1. In a friction clutch, the combination of two independently rotatable members mounted upon the same axis and having respectively cylindrical flanges of different diameters, of which the smaller flange lies within the larger flange, a split clamping ring in the annular space between said flanges and lying normally out of contact with the smaller flange, means preventing relative movement of the outer flange and one end of said ring, an external shoulder on the other end of said ring, a bent lever pivoted to the side of the member of which the larger flange is a part on a pivot parallel with the axis of said member, said level having one arm which extends outward from its pivot and is bent over the top of the flange and into contact with the external shoulder on the ring, and mechanism engaging with the other end of said lever whereby to rock it, substantially as and for the purpose specified.

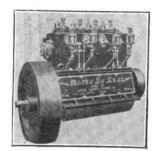
706,117. Clutch for Induction Motors. Alfred Schwartz, Munich, Germany, assignor to Helios Electricitaets-Aktiengesellschaft, Cologne-Ehrenfeld, Germany. Original ap-





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plication filed March 18, 1901. Serial No. 51,734. Divided and this application filed Oct. 28, 1901. Serial No. 80,230. (No model.)

Claim.-1. In a clutch for induction motors, the combination with a journal, of a belt pulley mounted on the journal and provided with an extended cylindrical wall, an interior wall or partition in said pulley, a disk mounted to slide on the journal, radially movable clutch jaws carried by said disk, rollers carried by and extending outwardly from said jaws, means adapted to engage said rollars for holding said jaws in the retracted position, and means for engagement with the interior wall of the pulley to release the retaining means whereby said jaws engage the extended cylindrical wall of the pulley, substantially as described.

706,121. Ignition Gear for Internal Combustion Engines. Frederick R. Simms, Bermondsey, Eng., and Robert Bosch, Stuttgart, Germany. Filed Sept. 20, 1901. Serial No. 75,862. (No model.)

Claim-1. The combustion with igniting devices provided with a movable member, of an igniter operating cam, a slide, a push-piece carried by said slide and movable with respect thereto, said pushpiece being inter-posed between the said cam and said movable member of the igniting devices, sub-

the incliner of the igniting devices, substantially as described.

2. The combination with the igniting devices provided with a movable member, of an igniter operating cam, a slide adapted to be adjusted transversely with respect to the shaft of said cam, and provided with a socket, a pushpiece movably engaging said socket and having a part to engage said movable member, and a part to engage said cam, substantially as described.

706,317. Electric Motor. Albert B. Holson, Chicago, Ill. Filed Nov. 4, 101. Serial No. 81,070. (No model.)

Claim-1. In an electric motor, the combination of a rotary armature, a drive shaft rotating therewith, a pinion on eeach end of said shaft and a surrounding driven member provided with duplex parallel annular gears having their pinion engaging surfaces facing toward each other and respectively engaged with said pinions in diametrically opposite relation, whereby the driving moment of the motor is simultaneously imparted to said driven element through both pinions.

706,340. Battery. William L. Panikoff, Nev Haven, Conn., Filed March 18, 1902. Serial No. 98,821. (No model.)

Claim-1. In a battery the combination with the plates thereof; of a cell; a rest upon which said cell is adapted to stand so that the mouth thereof will be under said plates and in a line therewith; an elevating lever one end of which is secured to said rest, and means for operating the other end of said lever so that said cell may be raised to contain said plates, substantially as described.

706,415. Driving Gear for Automobiles, Alfred Hitchon, Slayton-le-Dale, England, Filed April 12, 1902. Serial No. 102,498, (No model.)

Claim.—In variable speed driving mechanism for automobiles, the combination with the driving shaft and the driven wheel, of a plurality of sets of free wheel clutch devices, motion transmitting means between the same and the driven wheel, independent gearing between each set of said free wheel clutch devices and the driving shaft, and means, operated by a single handle, for withdrawing said gearing from connection with each set of free wheel clutch devices successively,

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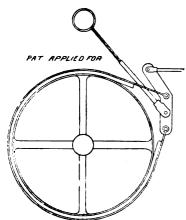
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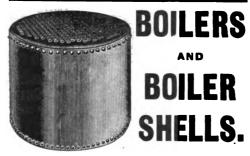


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beginning with that giving the highest speed, the driving gears for all speeds below the one inactive, remaining in operative connection with their respective free wheel clutch devices, substantially as and for the

purposes hereinbefore set forth.

706,439. Motor Vehicle. Harry M. McCall.
Pittsburg, Pa., assignor of five-eighths to
James Rees Sons' Co., Pittsburg, Pa. Filed March 7, 1902. Serial No. 97,077. (No Model.)

Claim-1. A motor vehicle consisting of a traction wheel having a track concentrically located thereon, a motor shaft having a disk adapted to engage said track, and a suitable guide for the motor shaft, whereby the said shaft may be moved in the arc of a circle about the centre of the traction wheel, a means for operating the guide, a motor mounted on said shaft, the weight of the motor, the shaft and their attachments being borne by the said track.

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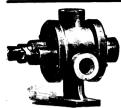


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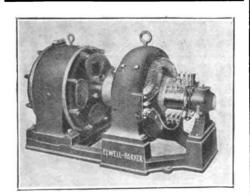
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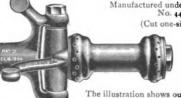
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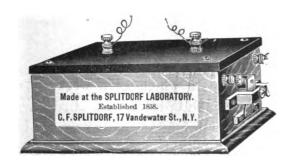
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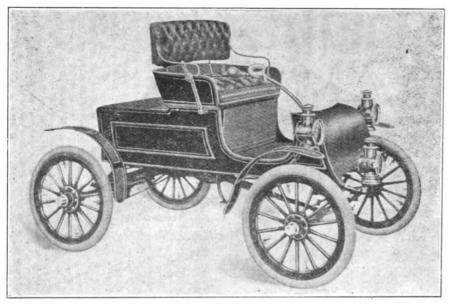
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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, August 28, 1902.

No. 22

MEET WAS INTERESTING

But Brighton Beach Events Lacked Excitement -Noted Men and Cars Absent.

Courtesy permits the race fficet of the Automobile Club of Long Island at Brighton Beach on Saturday to be termed an interesting affair; not even a stretch of imagination admits of its being described as an exciting one.

The above is a just verdict, tempered with mercy. The meet was interesting at times; but it was long drawn out, almost devoid of real contests, bereft of nearly all the stars that were expected to make it inspiriting and shortened by two of the races programmed. Even with this curtailment it was not over until 7 o'clock.

To the credit of the Long Island club and its race committee, it may be said that they worked hard and accomplished almost enough to make the meet a success.

But the entry list lacked the much prized "features" which such competitors as Vanderbilt, Bostwick, Keene and Fournier would have made, and of the vehicles actually entered an unpardonably large number either failed to put in an appearance or "balked" when the time came for them to race. To cap the climax, there was a general unreadiness on the part of the contestants, an unreadiness which the efficient clerk of the course and other track officials worked zeal-ously but unavailingly to conteract. The result was a late start and long waits between events.

It was an ideal day for the meet. Although it was mid August, the air was cool and sufficiently bracing to dispel all languor. The recent rains left little dust to contend with, and the gathering of automobiles was one of the largest ever witnessed in this country. Their occupants and the spectators who came in other conveyances made a number sufficient to show up respectably even in the immense stands at the Brighton Beach track. There were probably 4,000 people present.

There was quality in the audience, too. Many handsomely gowned women graced the grandstand and the clubhouse, or promenaded with their escorts in front of the former. Of the mere males, the gathering fitly represented the sport, the pastime and the trade. Pretty nearly everybody who is anybody was there, in spite of the fact that the town is held to be deserted just at this

(Contirued on page 617.)

Kilometre Records Slaughtered.

It was a veritable slaughter of the kilometre records that took place at Deauville, France, on Tuesday. New marks for the distance were set by nearly all classes of vehicles. The previous best time for the kilometre, that of Jarrott, accomplished only a few days before, was beaten by no less than four cars.

The star performer was M. Gabriel, who, in a Mors car, covered a kilometre (.62 of a mile) in 262-5 seconds, displacing Jarrott's 281-5, made at Welbeck, by 14-5 seconds. M. Chauchard, with a Panhard, also covered the distance in 263-5 seconds; M. Blon, with a Serpollet, in 271-5 seconds, and M. Levegh, with a Mors, in 28 seconds. All these cars were of the heavy category, the weight being limited to 1,000 silograms.

The speed indicated by M. Gabriel, the winner, gave a distance of 136 kilometres (85 miles) per hour.

The contestants had 600 metres in which to attain full speed and 300 for stopping. A heavy layer of sand aided the stopping, as 300 metres normally is not sufficient. About ten thousand spectators witnessed the running, and there were no accidents.

Jarrott Eclipses Vanderbilt.

A short-lived record was that of W. K. Vanderbilt, Jr., for the kilometre. After standing but a trifle over two weeks it gives way to a new one made on Friday last, Charles Jarrott, the victor in the Ardennes race, in which Vanderbilt finished third, covering the distance (.62 mile) in 281-5 seconds. This is 1-5 second better than the Vanderbilt time, which in turn clipped 2-5 second off of Serpollet's record made at Nice in April. Jarrott's performance was done at Welbeck, England, on a track built by the Duke of Portland. His car was the same Panhard in which he won the Ardennes race.

REAL RELIABILITY RULES

Boston Test Will be More Severe Than was Expected—Non-Stop Features.

With the publication of the rules for the 500-mile reliability contest promoted by the Automobile Club of America, which took place last week, preparations for this important function are seen to be in an advanced condition

As has already been stated in the Motor World, the run will occupy seven days, beginning October 9 and ending October 15, one of them, Sunday, being made a day of rest at Boston. The route will be through New Haven, Springfield and Worcester, both going and returning, night stops being made at the first two places. Four classes of vehicles will contest, viz., A, under 1,000 pounds; B, 1,000 to 2,000 pounds; C, 2,000 pounds and over; D, motocycles. An official observer will accompany each vehicle, and he will be maintained at the expense of the club.

The rules make the test a much more severe one than was generally expected. The restrictions are numerous, and in many cases extremely onerous.

This is particularly true of the rules relating to repairs. The replacement of such important parts as engines, boilers, axles and wheels is expressly forbidden. No repairs can be made except with the tools and extra parts carried on the vehicles, or with such local assistance as would exist under ordinary conditions. From 7 to 9 o'clock in the morning, and during the luncheon period, repairs can be made, as outlined, without penalty, but at other times one bad mark will be charged against the vehicle for every minute occupied in making the repair.

The system of marking is really the simplest yet evolved. Its primary feature is to give each vehicle one mark for every minute consumed on the run according to schedule, the latter being based on a fifteen mile speed, which works out at four minutes (marks) to the mile. From this total one

(Continued on page 629.)



DANGER OF SPEEDING

Most Skilful Chauffeurs Show Greatest Care— Abatement of the Dust Evil.

French Bureau Motor World,

2 Rue d'Abbeville.

Paris, Aug. 15.-The death of Mr. and Mrs. Charles Fair through an automobile accident at Pacy-sur-Eure yesterday has again emphasized the dangers of driving high powered cars at fast speeds, for though it is always regretable to lay the blame on the victims, truth compels us to say that the great majority of the accidents are due to the excessive speed at which the vehicles are driven. Last year Count Cahen d'Anvers met his death through reckless driving on a dangerous down grade with one of the big Paris-Berlin racing vehicles, which he had purchased from Charron. M. Henry Deutsch de la Meurthe nearly met with a similar fate the other day through travelling at sixty miles an hour on the Renault, which won the Paris-Vienna event, and now Mr. and Mrs. Fair have lost their lives in a similar man-

Mr. Fair had been in Paris since June "doing" the country on an automobile and attending all the motor car meetings, chiefly in the company of his brother-in-law, Mr. W. K. Vanderbilt, jr. He threw himself heart and soul into the automobile movement. He bought several vehicles, and we believe that at the time of the accident he was driving a 40-horsepower Mercedes. It was on this car that he made an unsuccessful attack on the mile and kilometre records when Mr. Vanderbilt broke them the other day.

At first it was said that the accident was caused through a collision when trying to pass a cart, but it now seems clear that it was due solely to the bursting of a front tire at a moment when Mr. Fair was driving at more than sixty miles an hour. At such a speed the slightest deviation is enough to send the car off at a tangent. The sudden shock and resistance caused by the bursting of a tire at a time when the vehicle was practically flying along the road would probably have shifted the steering wheels sideways, very slightly perhaps, but sufficiently to send the car off the road. It dashed into a tree and fell over on Mr. and Mrs. Fair, who were killed instantly, while the mecanicien is reported to be seriously injured.

Of course, it is easy enough to draw a moral from this lamentable story. It is done after every accident. Automobilists who drive vehicles at racing speeds carry their lives in their hands. Professional drivers are paid well for racing in consideration of the dangerous character of their occupation, and they are among the most cautious when speed is no longer their sole object. And yet amateurs, even so experienced as M. Henry Deutsch and Mr. Fair, drive their vehicles at racing speed. Perhaps an immunity in the past blinds them to the present danger,

and it is to be hoped that the terrible catastrophe of yesterday will bring home to owners of automobiles the considerable risk they run when driving at express speeds. A burst front tire, a sharp turning, or an obstacle in the road may shut out an existence which a moment before was revelling in the joy of living.

The terrible accident has given rise to the greatest consternation among automobile circles in Paris, where Mr. and Mrs. Fair were very highly esteemed, and its pathetic character is increased by the fact that Mr. Vanderbilt left France only the day before and is now salling toward the States quite unconscious of the fatality which has fallen on the two families.

Talking of accidents suggests another source of danger to automobilists, and that is the dust raised by vehicles travelling at even moderate speeds. It is so troublesome to tourists that experiments are now being carried out with methods of permanently laving the dust by means of oil, tar and other substances which, by mixing with the dust, will form a sort of hard asphalte. A week ago M. Henry Deutsch had a stretch of dusty road outside Saint-Germain laid with petroleum and the results are found to be thoroughly satisfactory, the road presenting a hard surface when dry entirely free from dust. Another experiment was carried out yesterday at Champigny, when two stretches of road were treated, one with oil and the other with tar, and though the dust laying possibilities are beyond all question the success of the experiment lies in the durability of the surface, and this can only be ascertained after several months of hard usage. In other parts of the country road surveyors are doing the same thing, so that there will be no lack of data to show the economy and efficiency of this system of dust laying. Owing to the cost of the product the roads can only be tarred or oiled at very rare intervals, though how often can only be ascertained when the cost of treating hundreds of miles of road has been ascertained, but as a setoff against the expense there is the question of road maintenance. which apparently would be much cheaper than at present since the highways would not be affected by the heavy rains. As a matter of fact, the water would simply drain off the oiled surface, while without this treatment it stagnates and sinks in ruts and holes, thus necessitating frequent repairs. The French would prefer to employ tar for dust laying, as this is a national product and its use would therefore be of great assistance to a home industry, but it is very doubtful whether tar can be successful owing to the way in which it would soften during hot weather. The best results are likely to be obtained with petroleum.

After the success of the Ardennes Circuit we are likely to see a great revival of automobile racing on circular courses. Not only have we a big race in the Campagne district in prospect for next year, but arrangements are now being completed for a circu-

lar race in the department of Hérault in October. In view of the interest being taken in this event it promises to be a great success. The course has not yet been definitely mapped out, but it will certainly be much longer than the Ardennes Circuit, and as the vehicles will only race around two or three times, they will not be required to pass each other so frequently, and it will thus be free from the drawbacks of racing over a fifty mile course.

Has Many Names.

Various names are given to the spirit used in explosion motors and steam motor vehicles. In this country it is termed gasolene, in England "petrol" and in France "essence." The English term is said to have originated in a novel way. "Petrol" is, according to the Motor News, really a proprietary name, and should no more be applied generally than if we called all pills "Beecham's" or all soaps "Pears'."

"Over ten years ago, when the Daimler Motor Syndicate first introduced spirit motors into England for propelling launches, they requested Carless, Capel & Leonard to manufacture a special petroleum spirit. After much experimenting this firm evolved a liquid of .680 sp. g., to which they gave the happy name of petrol. Previous to this no one had thought of using the word in this connection.

"After the passing of the Locomotives act in 1896 a great stimulus was given to the motor industry, and other spirits appeared on the scene. The principal was that supplied by the Anglo-American Oil Co., who imported 'Pratt's Motor Spirit,' and have always described it as such."

Taunton will Have a Meet.

During the first day of the Taunton (Mass.) fair, September 22, an automobile meet will be held, for which the following programme has been arranged:

From 11:30 a. m. to 12:30 p. m. luncheon will be served at the City Hotel at 12:45 p. m. there will be a short run about the city, followed by a circuit of the track at the fair grounds. During the afternoon there will be races for steam and gasolene machines, two-mile heats, with suitable prizes for the winners in each class.

Admission to the grounds will be free for all guests arriving in automobiles, and reserved seats will be provided in the grandstand for ladies.

Guenod's Protest was Disallowed.

As was expected, the protest made by M. Ernest Guenod of the award to Percy Owen of the prize for the heavy gasolene cars in the speed trials held on Staten Island on May 31 has been disallowed. The race committee of the Automobile Club of America met last week and took this action. The protest was made on the ground that each car should have been allowed but one trial. The committee held that the rules permitted more than one trial.



MEET WAS INTERESTING.

(Continued from page 615.)

time. It was a good natured crowd, too, one that laughed and talked and made light of the waits between the races.

The promises made on behalf of the track were fulfilled. It had been rolled hard and was fairly smooth, especially near the pole. Toward the close of the afternoon two watering carts were put on it to allay the dust.

The turns, and especially the turn coming into the stretch, were the blemish of the

faster track, viz., at Providence, Fournier, was able to do only 1:09.

Putting aside the Cannon mile, disallowed on account of the car not conforming to the rules, the steam record was given a tremendous beating. The Howard car placed the figures at 1:09 2-5, burying even the Davis straightaway record made at Staten Island on May 31. Two other records, those for the light weight gasolene class, comprised the list of victories over Father Time.

The Fournier Mors car did not put in an

sulted had the latter been permitted to compete. But it was disqualified right at the start of the afternoon's sport, a disqualification that was as unpopular with the crowd as it was distasteful to Cannon.

It was based on a rule that was so plain that there was no evading it, whatever may be said of the impolicy of waiting until the last minute before taking action. That rule stated that the control must be in the hands of one man. In the Cannon vehicle, a long, low, rakish-iooking car, the front man steered and could turn off the power; noth-

READY FOR THE OBSTACLE TEST.

A KNOTTY POINT.



track. Of course, that was something that could no be remedied; but it was the cause of the lack of sensational times, the reason why world's records a-plenty did not go by the board. The trouble lay with the banking, of course. It was insufficient for vehicles moving at close to a mile a minute speed. The bad turn referred to was sharper than its mate, and of an irregular shape. On it, George C. Cannon declared, his car slid six or eight feet and could not be sent around at anything like full speed.

But for this drawback records would undoubtedly have gone. As it was, three vehicles pressed the world's track record, Alexander Winton's 1:062-5, close. The Cannon steamer did 1:073-5; the Howard, 1:092-5, and the Mercedes-Simplex, in the hands of a comparative novice, 1:10. On a slightly

SETTLING THE CANNON PROTEST.

appearance, a broken shaft being the alleged cause of its absence. The Rothschild Panhard was also non est, and of the other manmoth gasolene racers only the Mercedes was present to live up to their reputation. The 35 horsepower Darracq did well, but suffered by being placed in the same class with the greater powered Mercedes. The perfect working of the latter, and the handling it received from its owner and driver, H. S. Hafkness, caught the fancy of the crowd and got all the attention they merited.

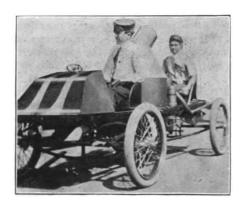
A great race between the Mercedes and the Cannon would undoubtedly have reing more. The rear man, Cannon himself, attended to everything else. The stewards, President Scarritt, of the A. A. A., and Chairman W. J. Stewart, of the race committeee of the A. A. A., being among them, unanimously voted to bar the car. Cannon, a true sportsman, did everything possible to get them to change their decision, but without avail. He then begged to be allowed to ride under protest, to go for the mile officially, and, finally, to be allowed to do this unofficially, the last request alone being granted.

Another dispute arose over the number of persons required to be carried in a race.



The matter hinged upon the interpretation of the rule referring to a "record race," in which only one person, the operator, need be carried. Percy Owen came out to ride alone, was protested, and, after a lengthy discussion, the protest was sustained, and he was required to carry a passenger, it being held that the race was not a record one.

The record trials of the Cannon, Howard and Harkness cars quite divided interest with the races. Of the latter, the ten-mile free-for-all had its interest in the splendid gait set by the Harkness car rather than in the so-called race. In the pursuit race, however, in which the three contestants were placed equal distances apart around the track, the splendid work of all three, the Mercedes, the Howard and the Darracq, aroused great enthusiasm. As the former closed in on the Darracq the only hearty applause of the afternoon was heard, and as it around the barrels. The vehicle which did this in the fastest time was to be adjudged



CANNON (IN FRONT) AND HIS CAR.

the winner. Trouble arose at once, however, W. H. Owen protesting that he had entered time 2:31 2-5. Won by one-fourth of a mile.

Second Heat, Gasolene Vehicles-Won by Peerless Manufacturing Co.'s car, driven by L. P. Mooers, time 1:39 1-5; second, De Dion-Bouton car, driven by Jacques Longuevez, time, 1:50 3-5; third, Waltham Mfg. Co.'s car, driven by L. E. Holden. Won by 150 yards; half a mile between second and third.

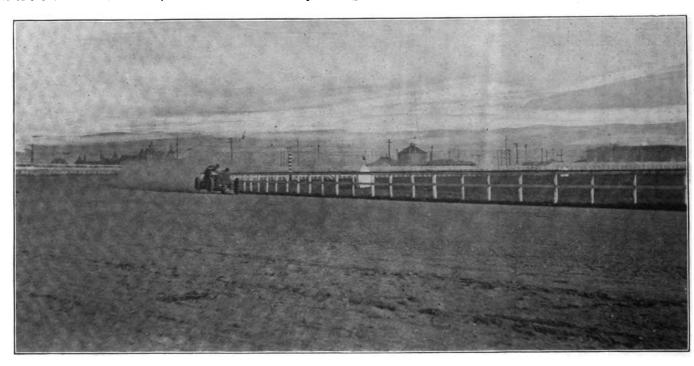
Final Heat-Won by Peerless Mfg. Co.'s car, driven by L. Mooers; time, 1:39; second,

Thomas Holden, jr.'s, locomobile.
Five-mile Electric—Won by Vehicle Equipment Co.'s car, driven by Knight Neftel. Walkover! trial stopped at end of two miles.

Exhibition Mile—George C. Cannon's car, driven by himself; time, 1:07 3-5.

Five miles; steam vehicles; all weights.
Won by Howard Automobile Co.'s car, driven by J. W. Howard; second, Thomas Holden, jr.'s, locomobile; time, 9:05. Won by a mile

Five miles; gasolene vehicles, 1,000 pounds and under; record 11:43 3-5. Won by Jacques Longuevez's de Dion-Bouton Company's car; second, Waltham Manufacturing Company's



THE MERCEDES ON THE BACK STRETCH.

flew by and sailed after and caught the Howard it became almost tumultous.

Despite the utmost efforts of Clerk Borland he could not get out enough cars to make a contest in the twenty-five mile lap race. The Harkness Mercedes was ready at all times, and for awhile it looked as if either the Cooke Darracq or the Howard would be pitted against it. By the time the farcical obstacle race had been gotten out of the way, however, it was very late, and the contest was called off. In its place Harkness went for a trial mile, doing 1:10 flat.

No one seemed to know very much about the conditions of the obstacle race. When the time for it came about half a dozen disreputable loking barrels were brought from somewhere and placed on the track a couple of hundred yards from the wire. Then the competing cars were brought together and their drivers instructed to go up to the turn, come down backward and execute "stunts"

his Gasmobile in an obstacle race and not a backward one.

"Why, my reverse gear will give only four miles an hour," he exclaimed. "The steamers can run just as fast backward as forward, and I have no show against them. I came out to win this contest, and I can do it if it is an obstacle race. But if you make us run nearly half a mile backward I shall take my machine off."

Steward Webb admitted the justice of Owen's complaint, but said it was too late to make a change.

"We will refund your entrance fee," he said, whereupon Owen declined to start.

The summary follows:

Event No. 1.-One mile heat race, for vehicles under 1,500 pounds.

First Heat, Steam Vehicles-Won by Thomas Holden, jr.'s, locomobile; time, 2:01; second, L. E. Holden's locomobile, time 2:27 2-5; third, L. A. Hopkins's locomobile, car, driven by L. E. Holden. Time, 8:30 2-5. Won by two miles.

Ten-mile free-for-all; record 11:09, made y Winton—on by H. S. Harkness in a Dy Winton—on by H. S. Harkness in a Mercedes-Simplex; second, Charles D. Cooke's Darracq, driven by F. A. La Roche; third, Peerless Manufacturing Company's car, driven by L. P. Mooers. Time, 11:54 4-5. Time by miles, 1:15 2-5, 2:30 1-5, 3:40 1-5, 4:51 1-5, 6:02 2-5, 7:13 2-5, 8:24 1-5, 9:34 1-5, 10:44 2-5, 11:54 4-5.

Five miles; gasolene vehicles, 1,000 to 2,000 pounds—Won by C. D. Cooke's Darracq, driven by F. A. La Roche; second, Percy Owen's Winton; won by half a mile.

Pursuit race; open to all-Won by H. S. Harkness's Mercedes Simplex; second, Howard Automobile Company's car, driven by J. W. Howard; third, Charles D. Cooke's Darracq, driven by F. A. La Roche; distance, 5 3-8 miles. Time, 7:13.

Obstacle race; open to all—Won by

Thomas Holden, jr.'s, locomobile, driven by W. F. Murphy. Time, 1:51 1-5. Second, H. A. Marble's locomobile. Time, 1:54 4-5. Exhibition mile—H. S. Harkness's Mer-

cedes Simplex. Time, 1:10.



1 776 3000 1 125



Published Every Thursday

By

THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING 154 Nassau Street,

NEW YORK, N. Y.
TELEPHONE, 2652 JOHN.

Leaden Office, 53 Piect Street, . . C. W. BROWN. Paris Office, 2 Rue d'Abbeville, . . R. F. COLLINS.

Subscription, Per Annum [Postage Paid] . \$2.00
Single Copies [Postage Paid] . . . 10 Cents
Foreign Subscription \$3.00

Invariably in Advance.

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to THE GOODMAN COMPANY.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY proceeding the date of sublication.

Those who are interested in motor vehicles will find the melities and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address Motorworld.

Entered as second-class matter at the New York, N.Y. Post Office, November, 1900.

NEW YORK, AUGUST 28, 1902.

Bowing to the Expediency Idol.

So it appears that expediency has won the day, and there is to be no separation of the sheep from the goats, the amateurs from the professionals, this year.

It is the old story over again. "There is no necessity for the separation," declares one; "wait until the evil develops," advises another. "Let well enough alone," is the suggestion of a third. A waiting game is favored by the powers that be, and, like Micawber, the American Automobile Association will wait for something to turn up before it feels itself compelled to move in the matter.

No one attempts to argue against the ethics of the matter.

It is virtually admitted that the question will have to be faced some day, and that just exactly what the Motor World has suggested, viz., the separation of the two classes, will then come about. The grotesqueness of an amateur racing for cash

and pocketing his winnings, his deliberate selection, with unction, is ignored. Don't disturb the present arrangement, as it might kill the racing game, is the "argument" made

But even the plea of expediency does not bear examination. "Encourage the game," its advocates cry.

But what encouragement is it to real amateurs to have to compete against, and be quite overshadowed by, professional chauffeurs? Will that develop the racing game? What chance has even a Bostwick against a Fournier? Very little, it must be admitted,

With less experienced and expert drivers, the chance against their professional opponents dwindles and dwindles until it becomes infinitesimal.

It is quite within the power of the American Automobile Association to continue the present lack of system in regard to the classification of drivers. It seems to be certain, as a matter of fact, that this will be done.

But it is equally certain that these same officers who now vote to stifle the agitation for a straightforward ruling will, either of their own volition or in obedience to pressure brought upon them, before very long take the matter from the table and execute a right-about face that will settle the question for all time.

The better plan, however, would be to take such action now.

Apportioning the Blame.

In the blame for the comparative failure of the race meet held at Brighton Beach on Saturday there are a number of sharers.

It will not do to allot the whole blame to the promoting organization, the Long Island Automobile Club, or to its officials.

They have their share, and it is no inconsiderable one. But it must be admitted, in all fairness, that "there are others." The latter aided and abetted the fault, a fault which came dangerously close to being spelled "fiasco." A less good-natured audience would have made things unpleasant for the promoters when its patience had been so sorely tried.

To be perfectly plain, there is blame to be laid at the door of the club, the officials, the race-governing body, and the entrants and contestants.

The club was at fault in accepting the entry of a star performer which contravened the racing rules, and in permitting it to be brought on and run in practice, without giving the slightest warning of what was to

happen immediately prior to the first race, viz.. its disqualification.

The officials were too lenient, too lax, too unappreciative of what was going on during the long afternoon. From two o'clock until nearly seven a program was permitted to drag itself along when it might have been run in half the time. There was delay, almost inexcusable delay, in starting—delay between the events. Better a disqualification or two than the intolerable waits that were endured.

The race-governing body knew that its rules were faulty and ill digested. It waited for them to be corrected by experience, when the experience of three seasons has givn a pretty good line on what is to be done in the way of revision.

Furthermore, it failed to devise rules that would make more interesting racing, and also to use the power it possessed to bring recalcitrant automobilists to a sense of their shortcomings. During the meet, even more than after, was the time for showing its strength.

Lastly, the entrants and the contestants participated in the fault. They gave little thought to the people who had paid their money to see good racing, and who alone make the latter possible. Petty jealousies swayed them instead, and they absented themselves or were unready or unwilling just as it suited their pleasure or their fears.

But in spite of all the slackness of conduct and the shortcomings of management, the meet showed that automobile racing does possess strong possibilities as a popular sport.

The pursuit race, the performance of the Cannon, Mercedes and Howard cars, and similar happenings enthused the crowd time and again. Indeed, it was only too willing to be enthused, a tolerant and a patient crowd. It applauded the good and made little of the bad in a manner that left nothing to be desired.

To be accorded a similar reception, the next Metropolitan race meet must be run with snap and vim, and have on its entry list more better known names than it did on Saturday. And, last but not least, the entrants must be made to realize that they owe a duty to both the management and the public—a duty that must be fulfilled.

Entails Much Hard Work'

In the forthcoming Reliability Contest the post of observer will be no sinecure. There will be thrust on him both responsibility



and work, the latter of an arduous character. He is reporter, policeman and, if he choses, mecanicien, all rolled into one.

All that has been said about observers and observing, and more, applies with unusual force to the contest under notice.

Upon the competency and conscientiousness of these observers depends the success or failure of the run. The competing vehicles have not only to come through, as was the case a year ago, but they have to come through in accordance with elaborate rules and regulations, restrictions and injunctions. Every minute of their time is to be accounted for, every alteration, adjustment or repair to be noted and reported. And the man selected for this difficult and delicate duty is the observer.

It is only fitting, therefore, that these men, upon whom so much depends, should be selected with care, and, once selected, looked after with the utmost solicitude.

With the design of avoiding such disappointments as took place on Decoration Day, when absenting cars resulted in an oversupply of observers, the Automobile Club of America has so framed its rules that a similar flasco is almost impossible. Both the entry of a vehicle and the appointment of an observer are regarded as contracts, binding on both parties. If for any reason either party is unable to fulfill his contract he is required to notify the other party, the entrant or the observer, as the case may be, as well as the club, so that arrangements may be made to supply his place.

This is as it should be. Now all that is needed is the selection of observers who can and will observe, and there will be little complaint on this score.

The Reliability Contest.

No one can peruse the rules of the 500-mile reliability contest, promoted by the Automobile Club of America, without being impressed by the vast difference between them and the rules of the Buffalo run last year.

The latter were few in number and of a comparatively unimportant nature. The former, on the contrary, are voluminous, carefully framed and so minute in character that they seem to cover every point that can possibly come up. The operator or observer who reads and digests these rules will have few emergencies arise that cannot be met readily.

To those who assumed that a mere pleasure jaunt was being arranged for, an easy run through a populous and interesting coun-

try, and at a time of the year when touring can be indulged in with the greatest enjoyment, the rules themselves are commended. They will find that the contest committee have had no such thing in mind. They proceeded on entirely different lines, and have evolved a set of rules which will almost inevitably result in stamping the contesting vehicles with their proper reliability marks.

More than ever before the observer is the key to the situation. His duties will be more onerous than would have been thought possible six months ago. He is made a sort of policeman, whose watchful eye is constantly on the vehicle and operator assigned to him. No stop of any kind, no repair of any description, can be made without the observer taking note of it.

As a matter of fact, the contest is, within controls, virtually a non-stop one.

Every non-penalized stop made counts against the offending vehicle. From the morning or noon start until noon or night control is reached every mile of the distance and every minute of the time counts points or marks. The perfect vehicle will be the one making no non-penalized stops whatever and never falling below fifteen miles an hour. Such a vehicle would earn 1,953.2 marks, a record that none could surpass.

For every stop made one mark is deducted for each one minute's duration of the stop; and a similar deduction is made for each minute consumed in the day's run in excess of the fifteen miles an hour schedule. The severe character of such a test will be readily seen.

While an average of fifteen miles an hour must be made to obtain the highest rating that speed must not be exceeded. Indeed, the solitary weak point in the rules seems to be here.

One of the clauses in the speed rule reads: "No average speed for each day's run in excess of fifteen miles an hour will be recognized or permitted."

It is obviously quite out of the question for an operator to make a run of eighty or ninety miles at an exact average pace of fifteen miles an hour. Not even the most perfect knowledge of the road and the most phenomenal judgment of pace can be counted upon to do this for six days in succession. Yet one minute outside means the loss of a mark, and one minute inside means—what?

"Will not be recognized or permitted," the rule regarding excessive speeding says. It is to be supposed that some leeway will be given, but it would be well to have the matter made a little clearer.

The rule relating to repairs is surprisingly simple, yet sufficiently comprehensive. None of the important parts are permitted to be replaced. Furthermore, only extra parts carried on the vehicle can be made use of, and the assistance of factory mechanics sent by train is expressly forbidden.

Tire troubles are excluded from the list of those carrying with them a penalty. At the same time these must be noted in detail.

Certificates of the first, second and third class will be awarded, for minimum speeds of twelve, ten and eight miles an hour. This is just as was done last year. But the award of marks, a new feature, will determine the standing of the car, quite irrespective of the certificate earned.

A wise provision is that giving the committee power to modify the control hours as the conditions seem to warrant.

Altogether, the rules bear the closest inspection well. There are one or two points needing a little more light, but the season's experience has been made use of, and the committee has done its work well.

One of the features of the recent Ardemes race appears to have been the position occupied by nearly all the mecaniciens. They are represented sitting on the floor of their cars, their legs dangling over the sides, and holding on with hands and feet as best they could. It is true that the roads traversed in the Ardennes circuit were of the "sand-papered" order. Nevertheless, such a position when going at sixty miles an hour could not have been a very comfortable one. It is to be feared that there were many black and blue mecaniciens to be found on the night of the race.

It is not enough to run one's car properly, to be an accomplished chaffeur. The care of the car is quite as important an item. To have the car in perfect order when starting on a run is a prerequisite to an uninterrupted journey. Tinkering at the last minute, or on the run itself, is a pretty sure sign that there has been neglect on some one's part.

An authority on the subject has declared that the leather cap is no longer en regle for owners. "A close fitting Scotch cap is the proper thing," he is quoted as saying. Well, almost any change is a welcome one when many of the monstrosities in the shape of caps are brought to mind.

Now it is an organization of professional chauffeurs that is talked of.





At the present prices of motor vehicles it is far easier to be a walking encyclopedia of automobiling than it is to be a riding one.

• • •

In some of the criticising to which the automobile has been and is being subjected the fact is brought home that it is a great pity some animals can't talk, and a greater pity that some men can.

Did you ever notice that whenever two men get to arguing about the advantages of this form of power or that, or of the superiority of one make of vehicle over another make, that one man is usually in the wrong; and it is always the other man?

"I have got money to burn," said the American trust magnate to the shrewd Frenchman. "Gim'me the finest automobile in yer place!" "Certainly, monsieur!" replied he of the Gallic shrug as he pocketed the American's checki for 75,000 francs. "And we have racing cars to scorch—and to sell." Then the warm exchange of international repartee, cash and commodity was terminated.

An honest manufacturer made as strong claims for the vehicle he built as the carriage would warrant. What he said was true.

A shrewd competitor always went him one better. What he said was not true.

The honest manufacturer lost the sales of some vehicles, but saved his reputation. The shrewd competitor fooled a number of people, but lost their friendship.

In the end the honest manufacturer had the bulk of the business. In the end the shrewd fellow had nothing but experience, which to him was of no value.

Moral (if you must have one)—Shrewdness is not a desirable quality in dealing with the purchasers of automobiles, or anything else.

Pardon me if once more I revert to the Frenchman's way of doing things and force myself to hold him and his methods up as models for ourselves to copy. In France, where the automobile flourishes like the bay rum tree of perverted proverb, automobile users have from the very beginning sought for and cultivated the friendship of horsemen, until to-day the new conveyance has no warmer supporters there than those who are still admirers and users of the old. Here in America, where the horsey set control our political destinies and prescribe the doses of legislation which we must take, it is a hundred times more necessary that we should not by ill advised and untruthful allegements of equine decline bring in solid array against the automobile the all powerful unharnessed hierarchy of the horse.

* * *

To tell you the real truth about automobiling from a sporting point of view, the trouble is, in this country, that from the first the purely sporting side of the vehicle fell into the hands of a lot of well meaning, but utterly inexperienced people. The whole thing reminds one of a fine baby whose misfortune it is to have seventeen maiden aunts and no mother-the baby may survive the seventeen different theories of how it should be raised, but if it does it won't be from anything but its own strength, and to help which a divine Providence sometimes vouchsafes in such matters. Certainly the American automobile infant has about the finest aggregation I ever saw of inexperienced incompetents endeavoring to raise it to manhood upon a diet of theories and experiments. I believe the youngster will survive even this, but, say, it's awfully tough on the young one. just the same.

An aged and respected gentleman has presented a public park to the city of Colorado Springs. That his gift was not to be used for the enjoyment of all people, nor as an encouragement of progress, the donator has specifically stated in his deed of gift that no automobiles shall be permitted to pass over the roads of his presentation park. With nothing but the kindlest feelings for the antiquated opinions of the aged donator, one cannot refrain from thinking how much he will regret having made this stipulation if he is spared only a few years longer. But whether he regrets it or not, long years after he has passed away and been forgotten selfmoving vehicles of forms and powers yet undreamed of will roll over the roads of that park. We may not like innovations sometimes, but it is given to no man fortunately to absolutely stop the advancement of progress, dislike as he may.

Well, we had the races at Brighton Beach all right! As a sample of sport, however, they were about as entertaining as a ping pong match between a couple of blind kittens would have been. No very great number of good American dollar owners will ever be induced to let go any appreciable amount of their surplus wealth to witness any such ring-around-the-rosy game as that one on Saturday was.

What was wrong with it? A lot of things. Skipping over fifty things like delays, shyness on the part of competitors, hair splitting in the interpreting of rules and regulations, an utter absence of contest between the vehicles, and, coming right down to the gist of why the assemblage was not frenzied in its enthusiasm, I'll tell you what was the chief cause of the frappeness—the public was not and never will be interested in Mr. Smith's hired man. The only genuine enthusiasm of the entire day came when two

young college men, who had been barred from competing on some cock and bull interpretation of the most confused and impracticable set of rules this country has ever sought to "govern" racing under, were allowed to show the assemblage how much faster than the vehicles which were allowed to win under the rules was the one which the collegians had built and were there to drive. The people were quick to respond to this American manhood, which not only thought out an original vehicle, but built and then raced it. There was no hired mechanic of a millionaire, or unknown workman from a factory running the vehicle, and in consequence the personal equation made the only performance permitted under the rules the only really successful number on the programme.

• • •

Get up a race between men like Vanderbilt, Bostwick, Keene, Fournier, Winton, along with some famous foreigners like Edge, Renault and Charron, and you will see the good old American public throw its dollars at you by the thousands for permission to witness the affair; but take a miscellaneous collection of vehicles, owned by no one knows who, and run by some one no one cares anything about knowing who they are, and you never will make a success of automobile or any other kind of racing. Given names that the public are familiar with, and all the remainder is easy. How is such a race as I have outlined to be brought about? Don't ask me. Why should I know? I can tell you what ails the patient and what will cure him, but I cannot tell you how you are to get the necessary medicine.

. . .

While I am at this matter I might also remark that the American people are well aware that the world is divided into two classes-the one which dines in its shirt sleeves and the other which deems the wearing of a coat necessary for the proper partaking of its dinner. Seemingly many of the gentlemen who officiated as chauffeurs on Saturday belonged to the coatless class and imagined they were going to dine. A dirty shirt, crossed in the back by a pair of greasy "gallusses," may be the beau ideal costume for a dinner party in certain society circles, but it is hardly an acceptable costume for a racer to wear before an assemblage of ladies and gentlemen at a race meet. Without a single exception the costumes and portions thereof worn by the contestants on Saturday were an offence to any one having even a hearsay acquaintance with soap and water, and the cleanliness begotten of their combined use as an external application. If automobile racing calls for the wearing of such disreputable and disgusting garments as those chauffeuristic scarecrows wore on Saturday, then I won't have to lay claims to any seventh sonship honors to foretell what the future of automobile racing will be. Here it is: 0.

THE COMMENTATOR.



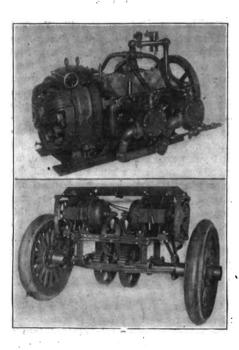
The Motor Morid.

CARRIED NINE TONS

Of Beer in a Single Load—A Model Brewer's Delivery Wagon.

In no quarter has the motor business wagon received more attention than among the brewers. They would be immensely benefited by the substitution of reliable self-propelled vehicles for the horse drawn ones now used.

But just as the benefits derived would be great, so the difficulties in the way are very formidable. The work is so exacting that brewers' horses have become proverbial for massiveness and strength. A motor vehicle designed to supplant them must be reliable,



fairly economical and, above all, of great power.

A concern that has given the subject considerable study is the Jacob Ruppert Company, this city. They recently had delivered to them by its makers, the Fischer Motor Vehicle Company, Hoboken, N. J., what is probably the largest truck that was ever sold, delivered and went into daily service. The accompanying illustration was taken of the truck while making its regular trip, at the time it was loaded with eighty-three half barrels of beer, weighing nearly nine tons.

In general the dimensions of the truck are as follows: Total length, 18 feet 4½ inches; width inside stakes, 5 feet; width over hubs, 7 feet 6 inches; wheel base, 10 feet 6 inches; size of wheels, front 36 inches, rear, 42 inches, equipped with 7 inch solid rubber tires.

Both the front and rear axles are trussed. The front springs are of the platform type, while the rear springs are half elliptic, with free sliding ends. All the strain due to

driving is taken up by push rods from spring saddles to frame.

The power equipment consists of a 4 cylinder 5½x6 gasolene engine, coupled direct to a 9 K. W. 110 volt dynamo, running at 550 r. p. m. approximately.

The two motors are of 8 H. P., each capable of standing an overload of 150 per cent. The battery consists of 44-136 ampere hours cells (3-hour rate). The controller has five speeds each way. Maximum, 4½ to 5 miles per hour, with full load, on level. The engine and dynamo complete are illustrated, together with a view of the rear axle and motors assembled as a complete driving unit.

While the vehicle was being tested it hauled a seven and a half ton load over a distance of twelve miles, one-third of which



Jarrott's Panhard Carries off the Honors—Run in a Heavy Rain.

Driven from Bexhill by the action of a cantankerous autophobe, the Automobile Club of Great Britain chose Welbeck as the only other available place for its speed trials on August 7. Welbeck is near Nottingham, and is the property of the Duke of Portland, who placed a road, on which a kilometre had been measured off, at the disposal of the club.

There the adherents of the latter betook thmselves, only to be confronted with about as wretched weather as it was possible to



was up hill. At one place the grade reached 15 per cent. When the run was completed the gasolene tank was filled, with the object of ascertaining how much fuel was used. It was found that it had cost just three-quarters of a cent per ton mile to haul the load for the twelve miles.

Causes of the Troubles.

A strong smell of burning rubber caused a motorist to stop his car and investigate. Upon raising the hood of the engine he found that one of the insulated wires leading to the sparking plugs had fallen against the engine and the insulation was almost completely burned away. But for the timely investigation a serious blaze soon would have resulted. The wires were shortened and secured to prevent a recurrence of the trouble, which in this case was due to carelessness of the makers of the machine.

Another motor vehicle owner, who was annoyed by a peculiar popping noise in the carburetter of the machine, took it almost all apart before he finally located the trouble in a worn intake valve.

The state of the s

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encounter. It had rained the night before, and all through the day it descended in sheets. Notwithstanding, the doughty automobilists proceeded to the course and ran the events off orderly and promptly. The rain had turned the road almost into a muck heap, and mud and water reigned supreme, so that very fast times were quite out of the question. The course is slightly downhill in one direction, and this was taken in all the trials except one, the general handicap, where the direction was reversed.

'Charles Jarrott, the winner of the Ardennes race, carried off the honors. In the scratch race for the fastest vehicle he covered the kilometre in 35 seconds, a 64 mile an hour pace, the next best time being 45 seconds, and in the general handlcap his time was 42 3-5 seconds. In the latter, however, he was beaten in net time by C. S. Rolls, who had an allowance of 19 seconds, and covered the distance in the actual time of 56 2-5 seconds.

Venice was reached several weeks ago by Charles J. Glidden of Boston, who is touring in Europe with a party of friends.

THE PRESIDENT RIDES

Nation's Head Shows Himself to Hartford Citizens Seated in an Electric Automobile.

During its "swinging around the circle" the Presidential party stopped over night at Hartford, Conn., last week. On Friday President Roosevelt, accompanied by a party of committeemen and notables, occupying fifteen carriages, was driven about the city in an electric Grand Victoria, fur-

with black, and the carriage is upholstered in the same colored cloth.

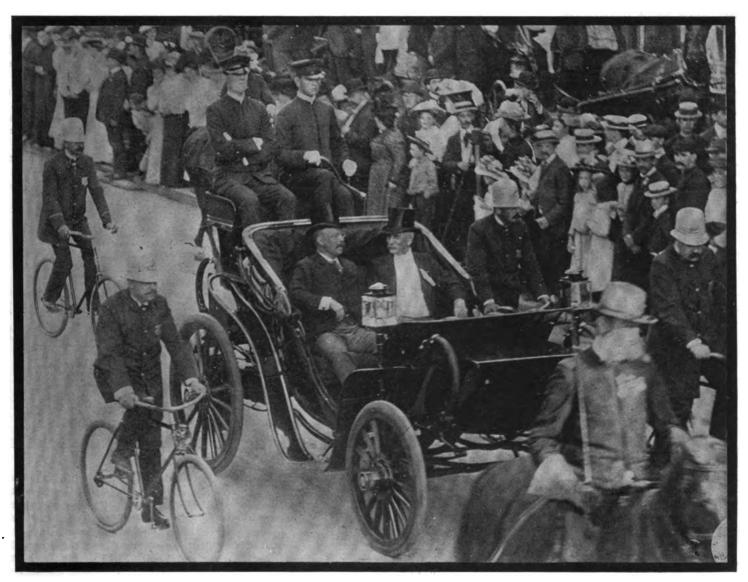
The carriage has a twin motive equipment, with flexible running gear and an emergency brake independent of the gear and pivoting. The body proper is hung on separate springs, on the principle of the old stage coaches, and the springs take up all the road jolts and vibrations.

There are forty-four cells in the exide battery, and the storage capacity is equal to a run of forty miles. The carriage complete weighs about 3,500 pounds.

RUN OF 118 MILES

On one Battery Charge at Indianapolis—Regular Stock National the Vehicle.

A run of 118 miles on one battery charge is the performance made last week by the electric vehicle owned by A. C. Newby, of the National Vehicle Co., Indianapolis, Ind. Mr. Nemby had driven the vehicle long distances on a number of occasions, one of them totalling 68 miles over country roads. The



PRESIDENT ROOSEVELT IN AN ELECTRIC VEHICLE AT HARTFORD.

nished for the occasion by the Electric Vehicle Co. On the box was C. Louis Fitzgerald, of New York City, one of the most level headed and efficient of chauffeurs, and at his side was John Sheehan, another New York expert. The entire route of seven miles was covered without a hitch or trouble of any kind, and the President expressed himself as delighted with the ride.

The carriage seats two persons, and the chauffeur rides behind, as in a hansom cab.

The body is painted a dark maroon, striped

Selects September 24.

September 24 is the date selected for the holding of the race meet of the Rhode Island Automobile Club at Narragansett Park, Providence, R. I. This was decided at a meet of the board of governors, held last week, and work has been started on the details. Secreary H. H. Rice was in New York last week attending the race meet at Brighton Beach. To the Motor World man he stated that every effort would be made to eclipse the meet of last year.

test of Thursday last was an outcome of these runs, as it was desired to see how great a distance could be covered.

The asphalt streets of Indianapolis were chosen for the trial, the start being late at night. The run was continued until early morning and resumed the next day, the total mileage recorded when the vehicle came to a stop being 118 miles. The vehicle was a regular stock one, and was equipped with a 40 cell battery.

There is talk of holding a race meet at Chicago during September.



BUILT BY BILLINGS

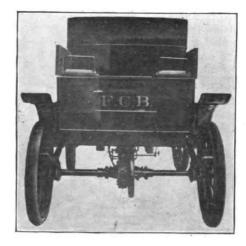
Steam Car Designed for Hard Work and Touring-Its Construction Described

The carriage shown in the accompanying cuts is one which has been designed and built at the Billings & Spencer Co.'s factory at Hartford, Conn., and illustrates an experimental steam carriage embodying numerous novel features, some of which show very radical departures from the ordinary steam wagon construction.

The carriage is designed particularly as a combination touring carriage and runabout, being built especially strong and adapted for heavy usage, and at the same time having such perfect and easy methods of control as to secure all the advantages which are usually found in the light steam

up below the foot board upon trunnions.

and actuated by a spline upon a rod let into the end of the main crank shaft, affords an almost perfect control for the engine. This

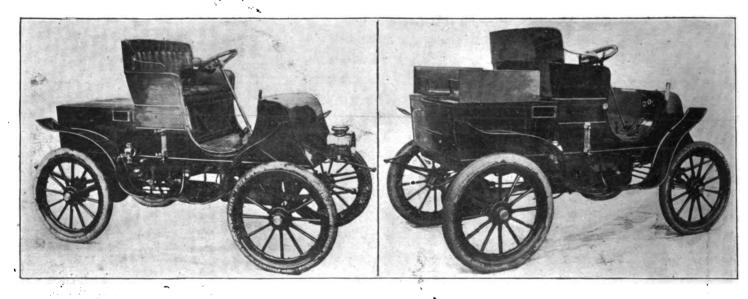


construction permits the encasing of all movable parts of the engine, even to the actuat-A four-cylinder compound engine is hung ing connection of the water pump, which is p below the foot board upon trumiens, driven from the cross heads. The splash

taken out of the main tank by a specially designed pump having a leakage chamber to prevent oozing of the gasolene about the stuffing box of the piston, and is forced into the glycerine chamber which cushions back against the air in the second chamber, and secures the necessary pressure for driving the gasolene to the burner. All of these parts, with the exception of the gasolene pump, are arranged within the tank, and thus there is comparatively no danger of fire from leakage. Furthermore, there is absolutely no pressure upon the gasolene in the main tank. It is a fact that the pressure chambers within the gasolene tank will hold up the gasolene pressure for an almost indefinite period, and this is attributed to the fact that the glycerine is absorbed neither by the air of the air chamber nor the gasolene

This arrangement has the further advantage of permitting an irregular form of gasolene tank which may be conveniently fitted into any part of the body, inasmuch as there is no pressure upon said tank.

The steering of the carriage is effected



which give it a universal movement, and its main shaft drives directly through a bevel gear to the differential gear of a divided rear axle. Thirty-two inch wheels are used on both axles, with three and one-half-inch double tube tired.

The body is supported over the axles on two full elliptical springs at the rear and two half elliptical springs forward. There are two high and two low-pressure cylinders which measure respectively three and five inches, and have a three and one-half inch stroke, giving under normal conditions about ten horsepower, although in emergencies a bypass may be opened, admitting steam directly to all four cylinders, thus securing a material increase in power. Piston valves of improved pattern are used, which cut off at the half stroke on the high-pressure cylinders and at three-quarter stroke on the low pressure cylinders, and a simple and effective reversing gear consisting of eccentrics borne upon a spirally grooved sleeve

system of oiling is used on the crank shaft and main engine bearings.

The boiler is of ordinary pattern of the firetube type, measuring nineten by sixteen inches, and having 547 tubes, giving, in conjunction with an automatically controlled fire, ample steaming capacity under all conditions. The water tanks are carried at the sides and below the rear end of the carriage, and carry sufficient water for a fiftymile run. The boiler is hung below the driver's seat and between the water tank, and gasolene tank, the latter being carried within the box dash. This tank has a capacity of sixteen gallons, sufficient for a run of 125 miles.

One of the most interesting features of the carriage, and a new one so far as known, is the arrangement for feeding the gasolene from the tank to the burner. Within the main gasolene tank are arranged two cylinders, one an air-pressure cylinder, and the other a glycerine cylinder. The gasolene is

from the right side by a hinged steering pillar with a hand wheel so arranged that when the wheel is not in use the steering wheel and its pillar may be thrown forward out of the way of the occupant. Just at the right of the seat is a segment arranged in a horizontal plane and traversed by a crank having a stop pin engaging the segment. This controls the main throttle valve.

Concentrically arranged with relation to this crank is a second lever, a movement of which controls the bypass upon the engine and either admits steam directly to all four cylinders or to the high-pressure cylinders only, in case the engine is running as a compound engine. The main throttle valve is also connected by a link with a foot lever which controls the brake of the vehicle, and when the throttle valve is once set to position for any predetermined speed, a complete control of the vehicle may be effected through the foot lever. This is located under the right foot of the driver. Under



his left foot is the reversing lever, and inasmuch as a piston valve and an eccentrically actuated reversing gear are used, this reversing lever can also be used as a brake with very good results. Its first movement cuts off the steam and causes a cushioning effect of the pistous which, of course, gives a very strong brake through the transmission gearing.

Altogether, the control of this carriage is one of the most elastic yet devised, and has the great advantage of being operated with a pedal control. The only function of the hand lever is to first set the throttle at a predetermined speed.

The present design of the body admits of carrying four passengers, the rear boot opening up and forming too side seats. The weight of the carriage is about 2,100 pounds, and it has been designed more to withstand hard usage and heavy touring than to secure a very light construction.

The usual automatically controlled steam water pumps and pressure regulators are used, and in addition an auxiliary injector is provided, by which the water tank may be filled from a brook or other accessible water supply.

The Billings & Spencer Co. are the largest forgings makers of automobile parts in the country, and have shown a very great interest in the automobile trade. This interest was so stimulated by their knowledge of the demands of the market as to result in the designing and building of the experimental carriage above described. It is safe to say that the care and study exercised by the company in investigating the designible points of steam carriages have resulted in perfecting an experimental carriage with vast possibilities.

No Law to bar Automobiles.

Not the most rabid autophobe cares to contravene the laws of this state, even when the latter confer rights upon motor vehicles. The story current last week that the village authorities of Lawrence, L. I., had closed the Meadow Causeway to automobiles has been run down by the American Motor League. It has elicited the following statement from Village Clerk Pettit of Lawrence:

"The Meadow Causeway road (in question) is now declared a public highway, and there is no law to prevent automobiles from using the same."

From which it will be seen that if such a notice was really posted it has been taken down.

Steam Vehicle Plant to be Sold.

It was originally contemplated by those in charge of the plant of the Steam Vehicle Co. of America to operate it for the purpose of working up the stock on hand into complete vehicles, in order that it could be disposed of to a greater advantage. The plan has been abandoned, however. Referee in Bankruptcy C. H. Ruhl writes to the Motor World that no action has been taken to operate it. "The plant will be sold," he adds.

"NOTHING DOING"

Unless another change of front should take place, the American Automobile Association will do nothing in the direction of adopting an amateur rule this year.

This fact was made plain by conversations the Motor World man had with prominent officers of the association at Brighton Beach last week during the race meet of the Long Island Automobile Club. A policy of inaction was favored almost unanimously. It is the present plan to bring the matter up officially, but with the result as outlined.

"Yes, we shall in all probability meet and consider the matter in a very short time," said President W. E. Scarritt in reply to the question. "But there is little probability of an amateur rule being adopted."

"Just keep your clothes on, you people of the Motor World, and wait until the time is ripe for a change," said Chairman W. J. Stewart. "The general feeling is that nothing should be done this year. Action would probably hurt the game, and that is what we wish to avoid above all things.

"Since Mr. Scarritt and myself talked with you we have been consulting people prominent in automobile and sporting circles, and we have experienced a change of heart. There seems to be no necessity for action now, while no harm can result if nothing is done. You may regard it as practically certain, then, that no action will be taken this year. It is a matter that has to do with the future, and to the future we are content to leave its solution."

"We considered the matter very carefully before we made our announcement that we would give the choice of cash or plate as prizes," remarked A. R. Pardington, a member of the A. A. A. race committee, "and we think we did the wisest thing. The Rhode Island club has followed our example, and will give a like choice at Narragansett Park on September 24."

"Although an old A. A. U. and L. A. W. man, having been one of the governors of the former organization, I am totally opposed to agitating the question at this time. It will settle itself in due course. Let it alone until an evil develops, then attack it," was the deliverance of Frank G. Webb, treasurer of the Long Island club, and ope of the organizers of the A. A. A.

"Oh, let us race for money if we want to," exclaimed H. S. Harkness, fresh from winning his first race. "What difference does it make, anyhow?"

Equally pronounced in his views was A. C. Bostwick, who, although he has not raced this season, intends to do so in the future.

"I have raced for cash, and taken it in preference to plate," he said to the Motor World man. "At Trenton a couple of years ago I was offered a choice of cash or cups, and chose the former. I told the promoters that I did not want their old cups. But I had to take them, nevertheless; I suppose because they had already been purchased.

"If an amateur rule were adopted it could not be made retroactive," he continued. "It would have to apply to future events only. Besides, it would do no good unless all the big clubs—I mean the foreign clubs—took similar action. The racing here does not amount to much. But we want to race abroad, and it would not do to have one rule here and another there. In France everybody races for cash. In the Ardennes race Vanderbilt did this. Of course, that does not make him a professional.

"What is the use of making an amateur rule?" he asked. "It would be an admission that we were afraid of the professionals, and that is not the case, as far as I am concerned. The Jockey Club takes the proper course, and ignores the matter entirely.

"It is the same old discussion that is continually coming up in the Horse Show. Many amateur drivers want to bar professionals there. You remember the trouble there was about 'Fatty' Bates? Many people wanted to bar him and his class. But they never were barred, and I am opposed to anything of the kind. Let everybody compete, and the best driver wins, no matter whether he is a professional or amateur."

Reminded that the question had cropped up with the trotting people, and that there is now a league of amateur driving clubs, with a strict amateur rule, Mr. Bostwick went on:

"Yes, I know, and I have decided to sell my trotting stable for that very reason. There is no fun in owning horses and having some one else drive them; and I haven't time to bother with the matinee races open to amateur drivers, so I am going to give it all up.

"How would you draw the line? Take my case. I am a manufacturer, too. Does that deprive me of my amateur status? It does in bicycle racing, does it not?"

On being told that the reverse was the case, he said:

"Well, that is better; but I can't see any necessity for drawing the line where automobile racing is concerned. It may be all right in other sports, but it has no place here."

In replying to the Motor World's inquiries regarding the matter, viz:

- 1. Shall the acceptance of cash as a prize in an automobile race make the operator of an automobile a professional?
- 2. Shall amateurs and professionals be allowed to compete in the same events?
- 3. Shall a person who is hired to operate and take care of an automobile be adjudged a professional? Hart O. Berg and D. E. Rianhard range themselves on the same side as the others quoted.

Says Mr. Rainhard:

"1. I have no objections to cash prizes for automobile races, and do not think the



acceptance of cash as a prize should make the operator a professional.

"2. I think amateurs and professionals should be allowed to compete in the same events.

"3. I consider a person who is hired to operate and take care of an automobile a professional."

Mr. Berg says:

"I do not think that acceptance of cash as a prize in an automobile race should make the operator of an automobile a professional, and beg to call your attention to the recent race in Belgium called Le Circuit des Ardennes, which was held under the rules of the Belgium Automobile Club.

"I believe that the rules of the Belgium Automobile Club are identically the same as those of the French club. The prizes for the winners in this race varied from 1,000 francs and a gold medal to simply 50 francs. I may say that Mr. W. K. Vanderbilt, Jr., won a prize of 600 francs and a silver medal, I should not think that he was a professional on this account.

"In answering your second question, I must again call your attention to the same race in which were entered such people as Vanderbile, Count Zborowski, Girardot, Tart, Gabriel, Osmont and Dernier. I can assure you that I should call many of the above professionals—that is, if the fact of being employed by a manufacturer to ride in a series of races can make an operator a professional; therefore, I beliefe that amateurs and so-called professionals should be allowed to compete in same events.

"Replying to your third question, in my opinion it would be impossible to always consider a person who is hired to operate and take care of an automobile a professional; for instance, a manufacturing firm may enter four, five, or ten automobiles in the same race. This is done continuously in Europe; in some cases the operators of these automobiles become the owners of same, if the carriage in which they are riding makes a good showing

"The above remarks are merely personal, I am not competent at all to give advice on racing matters."

The only dissenter of the week is Charles B. Shanks, of Cleveland. There is no mistaking his position or that of the three Western clubs, viz, the Cleveland Automobile Club and the Detroit and Chicago clubs. No cash prizes and a separation of the classes is their emphatic cry, and it is backed up by the announcement that no cash prizes will be offered at the Cleveland club's race meet on September 16, or that of the others mentioned.

"There will be no cash prizes offered at the Cleveland meet," he writes the Motor World. "I cannot tell you how the Cleveland club stands as a club, but my talk with the individuals has been to bring out the unanimous expression of opinion that the amateur and professional should not be allowed in the same class. There will be no cash prizes offered at the Detroit meet, nor will there be at the Chicago event."

SIDE LIGHTS AT BRIGHTON

Why Cannon was Disqualified—Bostwick Will Race on the Road This Fall.

Just after the stewards had formally disqualified the Cannon car, the Motor World man interviewed its owner, George C. Cannon, who had designed and built the racing wonder and took unmeasured pride in it.

"I am very much disappointed at not being permitted to compete," he said, "and cannot understand why I was not notified sooner. I came all the way from Maine to attend the meet, and have been put to considerable expense, to say nothing of the time lost.

"It did not occur to me that I was not eligible to compete," he continued. "Last year, at Providence, there was an objection raised to the car I then had, on account of my assistant having to do the pumping. But the rule forbidding this was amended, and the assistant is now permitted to help in this matter. Not having anything to fear on this score, I had not the slightest idea that there would be any trouble. Had I known in time I could have rigged the car up so as to meet the objections.

"It is impossible to say whether I shall compete at Providence or elsewhere," Mr. Cannon said in reply to a question. "It all depends on what must be done to make my car eligible."

A little later President Scarritt and Chairman Stewart of the American Automobile Association were sounded on the subject by the Motor World man.

"The car will have to be so arranged that one man, and one man only, shall do the controlling," was the statement made by Chairman Stewart. "In that way only can it be held to conform to the rule."

The rule referred to which caused all the trouble is No. 3, and reads as follows:

"A 'driver' is the occupant of an automobile in a race who has the exclusive control thereof."

The Cannon car came in for a great deal of attention, especially after it was known that it had been disqualified. Its owner and builder, George C. Cannon, son of a New York bank president, is a student at Harvard University, and an enthusiastic automobile designer. Last year he changed over a Locomobile in accordance with his ideas, and got a great deal of speed out of it. Not satisfied with it, however, he set to work on the present car, doing all the work himself, with the assistance of one or two fellow students.

In the absence of Vanderbilt, Keene, Shattuck and other racing and club celebrities, A. C. Bostwick came in for a great deal of attention. He looks a little drawn and thin, and his nose, or the upper part of it, is still plastered, a reminiscence of the operation performed on it a few months

ago. But his step is brisk and his manner alert.

To a Motor World man he stated that he should probably do some road racing this year.

"One of the cars I am building will be completed in a few weeks," he said, "and I shall test it and see what it can do. No, I shan't do anything on the track at the meets this fall, as I don't care particularly for them Besides, my nose is not quite well enough to stand fast driving. But I shall make some straightaway trials before the year is out."

The betting ring was perhaps two-thirds full of automobiles, the number of which did not fall much short of 200. In the paddock there were about a third as many. Many of the latter were contesting vehicles or those having some connection with the meet.

Not having been made by a car eligible to compete under the rules of the A. A. A., the Cannon record of 1:07 3-5 will not be recognized by the A. A. A. A statement to that effect was made before the ride took place.

Added to the List of Taxables.

Chicago's Board of Review has been hard at work adding to the list of the city's taxables. Last week it got among the automobile owners and, in the language of the day, "didn't do a thing to them."

Eighty-seven automobile owners had not answered the summons, and consequently seventy-six were given a valuation of \$1,000 each on their vehicles, a few escaped with a valuation of only \$500, while others were rated at \$2,000 and \$5,000. The net results of this part of the night's work was the addition of \$102,000 to the list of automobiles.

Making a Good Run.

A run over the Buffalo-New York course is being made this week by a Kensington automobile fitted with a Kelecom motor. A. H. Funke, 98 Duane street, New York, who is importing these well known motors, has been advised that the car passed Utica on Tuesday morning in splendid shape.

Hussey Goes: With Henry Ford Co.

The many friends of P. L. Hussey, he of the luxuriant mustache and genial manners, will be glad to learn that he has gone with the Henry Ford Co., Detroit, Mich., as superintendent and manager. It is whispered that this concern has far-reaching plans in view looking to the 1903 season.

Will Change the Date.

In view of the fact that October 11th, the date first selected for the race meet of the Massachusetts Automobile Club, will conflict with the Reliability Contest of the Automobile Club of America, it has been abandoned, Another date, later in October, will be selected.



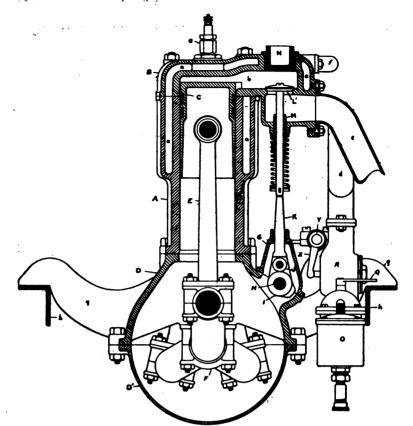
AN AMERICAN MOTOR

Designed on So-Called Foreign Lines—Some of its Original Features.

An American motor, typical of the development along foreign lines which has taken place within the last year, is the one used in the 16 horsepower gasolene touring car of the International Motor Car Co. As such it possesses a great many features of mechanical interest, and suggests the development that may be expected in the industry in the next few years.

The motor is of the three cylinder vertical type, mounted in front under a cast aluminum bonnet. This motor is of 16 brake horsepower, each of the three cylinders being of 41/4 inch bore and 51/4 inch stroke. The cylinders are cast integral or in a single casting of best gray iron. The combustion chamber and valve chamber for each cylinder are also cast integral. A soft copper gasket is fitted in the joint between the combustion chambers and the cylinders, thus forming absolutely tight joints. The cylinder walls and combustion valve chambers are water iacketed.

The crank case is cast in two halves of aluminum, the upper half carrying the motor supporting brackets and the shaft bearings. The cylinders are bolted to this casting in the usual manner. The lower half of the crank case may be removed should occasion require without disturbing any of the working parts of the motor. This portion of the crank case forms an oil reservoir, into which the cranks dip, and in this way the crank bearings and connecting rod bearings are lubricated. The cranks are set at 120 de-



First cylinder in perspective; second cylinder valve chamber in section; third

First cylinder in perspective; second cylinder valve chambers in section, A-A-A, Cylinders; a-a-a, Water jackets; B-B, Valve chambers; b-b, Compression spaces; C, Piston; c, Exhaust pipe; D', Lower half crank case; d-d, Inlet tubes; E, Connecting rod; e-e-e, Ignition plugs; F-F, Crank boxes; f, Water tube; G-G, Cam shaft cases; g, Supporting bracket; H-H, Cam shaft; i, Circuit breaker; K-K, Valve lifters; L, Inlet valve; L', Exhaust valve; i, Counteracting spring; M-M, Valve guides; m, Throttle governor connecting link; N-N, Valve covers; O, Carburetter; P, Carburetter regulating screw; Q, Mixture valve lever, R, Throttle valve chamber; S, Motor shaft pinion; S', Cam shaft gear; T-T, Governor; U-U, Governor arms; V, Governor sp.irg; W, Throttle cam; X, Rock shaft arm; Y, Rock shaft.

grees, and the shaft is forged of a single piece of "car axle steel." After turning it up it is hardened and ground on centres.

FIG. 2. END SECTION.

A. Cylinder; B. Cylinder head; C. Piston; D. Crank case (upper half); D', Crank e (lower half); E, Connecting rod; F. Crank bearing; G, Cam shaft case; H. Cam ft; I, Cam; J, Cam roller; K, Exhaust valve lifter; L', Exhaust valve; M, Extat valve guide; N, Valve cover; O, Carburetter; Q, Mixture valve lever; R, Throtvalve chamber; Y. Rock shaft; Z, Rock shaft arm; a—a—a—a, Water jacket; b, appreciation space; c, Exhaust pipe; d, Inlet tube; e, Ignition plug; f, Water tube; g, Supporting brackets; h—h, Sub, frame of vehicle.

The shaft is mounted in adjustable bronze bearings, four in number. The cam shaft, which operates not only the exhaust valves, but the inlet valves as well, is driven from a bronze pinion on the engine shaft meshing with a bronze gear keyed to the cam shaft. The cam shaft is also lubricated on the "splash" principle from the crank chamber of the motor.

The connecting rods are drop forged. The pistons, cast in a high grade gray iron, each have two ring grooves of double width, and each groove carries two rings. The cylinders are bored and then "lapped" out, thus insuring a perfect internal surface. The inlet and exhaust valves are turned from forged nickel steel blanks. A screw plug covers each valve, removing which the valves are readily accessible.

A single float feed carburetter of large size supplies the three cylinders through an ample three-way induction pipe. The carburetter is attached to the motor, and forms an integral part of it. A simple centrifugal governor controls the speed of the motor on the throttling principle. The action of this governor is prevented by a small foot pedal, or "accelerator." When this pedal is depressed the speed of the motor is then entirely controlled by a hand operating spark timing arrangement.

Ignition plugs are located directly over the centres of the pistons. A very heavy flywheel forms the fixed clutch member, according to usual practice.

ELECTRIC BATTERY PRINCIPLES

General Belief in Their Complexity an Error— Early Workers in the Field.

"To the great majority of people the electric storage battery is a deep and incomprehensible mystery," says an electrical engineer of Pittsburg, who has had a wide experience both in this and foreign countries, in speaking of storage batteries. "The popular idea is that by some sort of legerdemain the electric fluid is bottled and packed away in a box to be used as the occasion calls for. Whether the power is drawn out through a tap as the water is at the kitchen sink or is turned on through a switch like an incandescent electric lamp, they have no idea, and bother themselves very little about the matter.

"As a matter of fact, the electricity is not stored at all, but is converted into chemical energy by converting one form of lead into another form. When this changed form seeks to return to its original form the chemical reaction causes a current of electricity, and this current is caught and distributed on wires. As these changes can be repeated many times, the effect and appearances are the same as if the electric current had actually been stored up or accumulated in the storage battery.

"When two lead strips or plates are put into a bath of diluted sulphuric acid and a current of electricity is passed through the solution from one plate to the other a chemical action takes place. This results in theformation of peroxide of lead on one plate and a spongy lead on the other. Peroxide of lead is one form of a combination of oxygen and lead, if anybody should ask you. Should the electrical current be discontinued and a wire made to connect the plates, a second chemical action takes place, and this will send a current of electricity through the solution of sulphuric acid and water and the wire, but in an opposite direction to the original or charging current.

"This current, however, will be of short duration even though the charging current be considerable, because the surface only of the lead plates is affected by the chemical action, the first film of peroxide formed protecting the lead underneath from further oxidation. By repeating the form of charging and discharging, which is called forming, a practical storage cell, can be built up. Each forming tends to make the storage battery of greater capacity, for the forming eats further into the lead and exposes more surface to be oxidized.

"Two Frenchmen are responsible for the storage battery, and they were not close friends, as their names were not Alphonse, but Camille and Gaston. Alphonse may have waived his claim to the invention of Gaston Plante, who now is credited with the original invention. His process was demonstrated in 1859, but too much time was required to form the lead plates or electrodes.

"Twenty years later Camille Faure, another Frenchman, discovered that by pasting the active coating on the sheets of lead in the shape of oxide of lead a storage battery could be made in a few days, instead of months, as by the Plante process.

On a Testing Run.

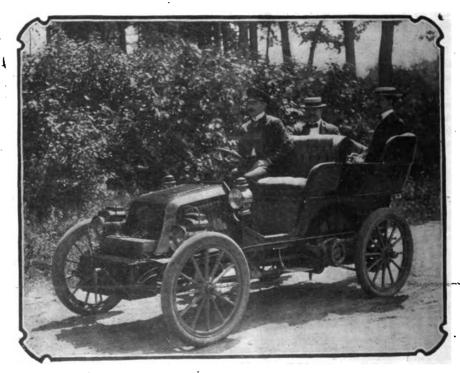
In the process of "trying out" the Law vehicle, which, with its maker, has beeen acquired by the Electric Vehicle Co., many trips, both long and short, and over all kinds of roads, were made. Advantage was taken during one of these to get a snapshot of the vehicle and its occupants. It was completely successful, as the "look pleasant" attitude of the passengers attests. The back-

WHY ROAD RACING LAGS

An English View of American Roads and Their Repressive Effect on Speeding.

"It is at first sight rather strange that the Americans do not favor motor racing. Its press condemns most of the European contests as 'orgies of speed,' 'mad freaks,' and such like. That a people who are so fond of sensationalism and excitement should so strongly oppose motor racing would be rather inexplicable, if we did not consider how America is situated in the matter," says the Motor Car.

"A little research will show that she prac-



LAW GASOLENE CAR.

ground of green, the smooth road, and the perfect working of the car unite to form a picture which tells plainer than words the pleasure of the right sort of automobiling.

Wanted a Different Kind of Ordinance.

A wag in his way is Fred. L. Smith, president of the Olds Motor Works. He astonished the Detroit Council recently by remarking, apropos the proposal to enact an automobile speed ordinance, that "if the common council can suggest any way to absolutely guarantee the starting of a gasoline machine at any time, I am sure the owners of such machines would indorse any sort of a speed provision the council sees fit to adopt. I'll venture the assertion that there are more machines stuck on the streets of Detroit every day than there are that violate the speed ordinance."

No suggestions were forthcoming, however, and when the laughter which Mr. Smith's remarks had occasioned subsided, the committee again settled down to a consideration of the proposed ordinance regulating the use of automobiles.

tically possesses no first class roads, and has few speed cars. In the matter of thoroughfares America has bestowed practically all her energy on the construction of railroads and tramways. The art of macadam has never been studied. It might be worth the while of an English or a French syndicate to open up roads in America and show the natives what good highways are. At present the motorists and cyclists have little better than rough tracks to drive on, and speed is an impossibility.

"So bad are the roads in a considerable part of the States that cycling has declined on account of the discomforts experienced, and riders have contented themselves with pottering about the streets and boulevards of the towns. Motoring, too, has been much delayed, owing to the same cause. A country possessing so much mechanical genius as America, and the home of gasolene and electricity, should have taken the lead in automobilism, had there been any kind of an experimenting ground available. France had her magnificent highways ready made, and on them the motor car designers obtained invaluable experience in a minimum of time.



REAL RELIABILITY RULES.

(Continued from 615.)

mark is deducted for each minute of penalized stops, and also for each minute in excess of the fifteen mile rate occupied in making each day's run. Thus the car which comes through without a penalized stop, and at an average speed of fifteen miles an hour, will obtain a perfect rating.

Quite apart from this rating certificates will be awarded, based on the average speed of each car. This is exactly as was done last year.

Beyond the rule that each vehicle shall carry two persons, one an observer, no restrictions are placed on the number of passengers. The observer can render the operator any assistance in his power; and the operator can be changed within the controls whenever desired.

The contest committee has power to disqualify any contestant for travelling at an excessive speed. Efficient mufflers must be fitted to all cars.

The complete rules are as follows:

L

It will be assumed that every contestant is acquainted with the rules of the contest, and by entering therein he agrees to abide by said rules. In the event of dispute concerning the interpretainon of the rules, the decision of the contest committee shall be final. The committee reserves the right to alter or amend these rules from time to time as they may deem expedint.

II.

LIMIT TO NUMBER OF VEHICLES.

The contest will be open to all classes of self-propelled vehicles, made in the United States or abroad, so constructed that at least two passengers are carried seated side by side, but no manufacturer, agent or private owner shall be allowed to enter more than three vehicles in any one class.

Entry blanks will be forwarded by the club secretary upon request, and must be filled out in full.

III.

ENTRIES.

(a) The time for receiving entries will expire on September 25, 1902.

(b) All entries must be accompanied by the following information in full:

Weight of the vehicle, including fuel, supplies and equipment.

Water capacity; gasolene capacity. Name of manufacturer.

Place of manufacture.

Tires—make, size, weight, double or single tube, retail price.

Number of passengers the vehicle can carry.

Motive power.

Rated horsepower of the motor and number of cylinders.

For electric vehicles: Weight of battery.

Number of cells.

Ampere hour capacity.

No entry will be received unless every question on the entry blank is answered, nor will any entry be received unless accompanied by the entrance fee.

IV.

ENTRANCE FEES.

(a) The entrance fee for all classes, motocycles excepted, up to and including September 10, 1902, will be \$50 for each vehicle. In the motocycle class the entrance fee will be \$25 for each vehicle. After September 10, 10 per cent will be added to the entrance fee for all classes.
(b) The entrance fee shall be paid by check

to the order of the treasurer of the club, and be forwarded to the club secretary with the

(c) Each person making an entry agrees that in the event of the vehicle being disqualified or failing to take part in the contest the entry fee shall be retained by the

(d) The club shall have the right to refuse an entry without stating any reasons.

BASIS OF CLASSIFICATION.

All vehicles, whether electric, steam, gasolene or otherwise, shall operate in the same class, which classification shall be on the basis of weight.

CLASSIFICATION AND DIVISION.

Vehicles shall be divided into the following classes: All four wheeled vehicles to carry two or more persons. (Three wheeled vehicles carrying two passengers side by side and conforming in all other respects to four wheeled vehicles, to be provided for by special arrangement in Classes A or B.)

Class A-Under 1,000 pound class. wheeled motor vehicles weighing under 1,000 pounds, in commercial running and operating condition, with all tools, fuel and supplies on board.

Class B-1,000 to 2,000 pound class. Four wheeled motor vehicles weighing 1,000 and less than 2,000 pounds, in commercial running and operating condition, with all tools, fuel and supplies on board.

Class C-2,000 pound and over class. Four wheeled motor wheeled motor vehicles weighing 2,000 pounds or over, in commercial running and operating condition, with all tools, fuel and supplies on board.

Class D—Motocycle class. Motor bicycles, motor tricycles and motor quadricycles.

VII.

ELECTRIC VEHICLES.

Electric vehicles may recharge or replace batteries at noon and night controls without penalty. All other rechargings or replacements will be counted as penalized stops, and the length of time thus consumed will be noted by the observer.

VIII.

WEIGHING OF VEHICLES

All parties making entries for the contest shall appear before the committee at the Automobile Club on Tuesday, October 7, 1902, between the hours of 9 a. m. and 6 p. m., and, after receiving their official number, shall go to a place designated by the committee and have their vehicle weighed and an official seal affixed thereto.

The committee reserves the right, at the time of weighing, to reject any vehicle, if they see fit to do so, and return the entrance fee.

OBSERVERS.

(a) Every vehicle shall carry an official observer, who will be provided by the club, Each observer will be provided with a dis-tinctive badge, bearing the official number of the vehicle in which he is to ride, which must be conspicuously worn on the outside of the coat.

(b) Observers will record the actual time of the start and completion of the contest and also the time of all stoppages from the actual stop to the actual start of the wheels. from whatever cause, and the cause of each stop must be recorded in full on the record sheets, with which they will be provided.

(c) Observers will also keep an accurate and detailed record of any repairs made to the vehicle en route, at the noon control and during the morning hours from 7 a.m. to 9 a.m., allowed each day for repairs and adjustment.

(d) It shall be the duty of the official observer to caution the operator of the vehicle in which he rides when he has used less time between controls than that shown on the schedule, but any caution or lack of caution from the observer is not to relieve the operator of the vehicle from his responsibility concerning the speed. Should the observer's caution be disregarded, it shall be the duty of the observer to note this fact upon his record sheet.

(e) Observers may render any assistance within their power to the operator of the vehicle.

INSTRUCTIONS TO OBSERVERS.

(a) The official observer for each vehicle will be assigned to the vehicle in which he is to ride one week in advance of the date of starting. He will be informed of the name and address of the owner of the vehicle and its official number, and be furnished with the rules and programme of the contest, and a badge corresponding to the number of the vehicle. The owner of the vehicle will at the same time be advised of the name and address of the observer who has been assigned to his vehicle.

(b) If for any reason the observer finds he will be unable to start, he must at once notify the owner by telegraph of this fact, also the club secretary, and return his badge to the secretary, who will immediately assign another observer to such vehicle.

(c) If, on the other hand, the owner for any reason finds his vehicle will not be able to start it shall be his duty to notify the club, and also his observer, of this fact by telegraph, and the observer can then report to the club secretary and receive another assignment.

(d) Each observer will provide himself with a watch, which he will set by the clock over the window of the Plaza Bank. will also provide himself with a mackintosh and a small cap, and with lead pencils or a

fountain pen.

(e) It shall be the duty of the observer to report to the vehicle to which he has been assigned at 8:30 a.m. on the morning of the start, and not leave it except during noon or night stops or in case of illness. Should an observer at any time be incapacitated from continuing the run he will turn over his time card and official badge to the operator of the vehicle, who will complete the record as far as the next control, where a new observer will be provided.

(f) Coupons for hotel accommodations at noon and night stops will be mailed to ob-

servers before the start.

(g) If during the progress of the run a vehicle in which an observer rides is for any reason unable to continue, the observer may take train to New-York and at once turn in to the club (1) memorandum of the cost of his railway transportation, which will be paid by the club; (2) his unused hotel coupons; (3) his official time book.

(h) On the morning of each day of the run it shall be the duty of the official observer to report to his vehicle at the garage at 7 o'clock, when it is turned over to its owner and remain with it as far as possible until it is ready for the start at 9 a.m. During this time he shall keep a record of all repairs made to the vehicle or replacement of

(i) He shall also keep a careful record of repairs made en route throughout the entire run, note what supplies are taken on between controls, and for electric vehicles



the time consumed in recharging or replacement of batteries.

(j) At the noon control the observer must also record any repairs that may be made

during the stop for luncheon.

(k) On arriving at the night control the official observer shall remain with his vehicle until its tanks have been filled with water and gasolene, and it has been placed in the garage in charge of the committee's guards. No adjustment or repairs are to be made on the vehicle on arrival at the night control or while it is receiving water and gasolene.

(1) The observer will sign and surrender his record book to the timekeeper in New York immediately after the finish of the con-

CONTROLS

(a) Controls are to be officially established at the beginning of each day's run, at lunch-eon places and at the end of each day's The start is to be made each morning at 9 o'clock, and an hour and a half will be allowed for luncheon, except that any contestant arriving at the noon control at 1 o'clock or after will be allowed but one hour for luncheon. He will be called one hour after the time of his arrival, and his time will be counted from the time that he is called; but no vehicle will be allowed to leave the noon control before 2 o'clock.

(b) During the luncheon hour at the noon control contestants may take on fuel, which will be available, and make such adjust-ments and repairs as can be accomplished with the tools and extra parts carried on the vehicle, and with such local assistance as may be readily obtained under ordinary touring conditions, but will not be permitted to have work done on their vehicles by their mechanics or assistants travelling by train.

(c) The times for opening and closing controls will be modified according to the conditions which may arise during the contest.

The noon control will open at 11 a. m. and

close at 4:30 p. m.

The night control will open at 4 p. m. and

remain open until 9:30 p. m.
(d) The time of arrival of each vehicle at the point of control will be recorded by the officials at control on the record sheets also on the record books of the official observer of the vehicle.

(e) The site of control will be designated by a red flag with the word "Control" prominently printed thereon in black. This flag will be prominently displayed on both sides of the road at the point of control. There will be notification by means of a green flag 200 yards in advance of the control point as

a warning of the approach to the control.

(f) Controls are to be established in the following manner: If a green flag is dis-plared the vehicle shall slow down to a speed of not to exceed eight miles an hour until a white flag is passed, when speed may be resumed as before. On coming to a red flag the vehicle shall come to a full stop until the driver is permitted by the steward to proceed. At night lanterns, similarly colored, may be used instead of flags.

NIGHT CONTROLS.

(g) There will be at each night's stopping place a storage inclosure, in charge of a superintendent and assistants, for the storage of vehicles for the night. Watchmen will be on duty during the night.

(h) On the arrival of each vehicle at the night control its tanks must be filled with water and gasolene in the street outside of the storage inclosure or garage, where supplies will be available, but the vehicle shall receive absolutely no other attention, and must be immediately placed in the garage. All fires on steam vehicles, all lamps used for ignition and all lamps used for illumination must be extinguished before the vehicle is placed in the garage.

(i) At 7 a. m. each contestant may take his vehicle, and, under the eye of the official observer, make such lubrication, adjustments and repairs as may be necessary. No one will be permitted to enter the garage, except the official observer, the owner or driver of a vehicle and his mechanic, and such local assistants as may be employed. Contestants will not be permitted to have mechanics or assistants travelling by train to do work on their vehicles.

(i) No fires on steam vehicles, no lamps for ignition or illuminating purposes on au-tomobiles are to be lighted in the garage during the morning hours allowed for repairs or adjustment.

SMOKING IN THE GARAGE WILL BE STRICTLY PROHIBITED AT ALL TIMES.

(k) Each vehicle shall be ready to start at 9 a. m. sharp. If a vehicle is not ready to start when it is called time will be taken for such vehicle, and any delay in starting will be charged against it.

(l) The club has made arrangements for an adequate supply of gasolene at the noon and night controls, which may be purchased by contestants. Contestants will make their own arrangements for lubricants.

Contestants needing supplies at other than the noon and night controls will be required to make their own arrangements for same. Official observers will note what supplies are taken on between controls.

XI.

REPAIRS.

No replacing of engines, boilers, axles or wheels will be allowed. Such repairs only will be permitted as can be accomplished with the tools and extra parts carried in the vehicle and with such local assistance as may be readily obtained under ordinary touring conditions. ing conditions.

XII.

STARTS AND STOPS.

(a) Vehicles will be started from the control the first morning at 9 o'clock. time of starting from each control the vehicles shall approach the starting line and take their places one behind the other in the order of their approach to the starting line, leaving a space of at least ten feet between every two vehicles. As each vehicle starts the others shall move up one place.

(b) Vehicles approaching control points shall follow the same rule as at starting

points.

(c) If it becomes necessary for a vehicle to stop it must first be driven to the extreme right of the road as nearly as practicable.

(d) All stops from whatever cause will be timed and recorded by the official observers. Stops for the following causes will be considered involuntary stops, and will not count against the vehicle, although such stoppages must be recorded, as set forth above:

1. Compulsory stop of one and one-half hours for luncheon, which will be made at specified places indicated in the programme.

Road blocked by traffic.

Tire troubles (see Rule XIV).

Stoppages by police.

- To avoid frightening timid horses.
- To render aid in case of accident.

Blocked railroad crossing.

Demands of nature.

To recover articles accidentally dropped

from vehicle.
10. To light carriage lamps.

(e) Steam vehicles will be allowed a total of twenty minutes stoppage for gasolene and water between controls in each half day's run, for which marks will not be deducted. One mark a minute will be deducted for time thus consumed in excess of twenty minutes.

XIII.

SYSTEM OF MARKING FOR RELIABIL-

There will be a maximum number of marks for reliability for each day's run, viz:

Day.	Miles.	Marks.
FirstNew York to New Haven Second. New Haven to Springfield FlurdSpringfield to Boston Fourth. Boston to Springfield FifthSpringfield to New Haven	. 68.6 . 98.6 . 96.6	316 274.4 386.4 396.4 274.4
SixthNew Haven to New York		316

This number is based on an average speed of fifteen miles an hour, or four minutes to the mile. The maximum number of marks for each day's run is ascertained by multiplying the number of miles by four. Thus New York to New Haven, 79 miles x 4 Thus equals 316 (minutes) marks, which represents a clean run at an average speed of 15 m. p. h., and one mark will be deducted for each minute the vehicle is at rest from the time of starting to the conclusion of a day's run, except the involuntary stops mentioned in Rule XII.

Thus if penalized stops amounting to thirty minutes are made during the day thirty marks are deducted; 316 minus 30 equals 286 total reliability marks for the day. In like manner if a vehicle on account of slower speed takes more than 316 minutes to cover the 79 miles (exclusive of involuntary stops) one mark is deducted for each minute in excess of 316 minutes.

PRIZE FOR RELIABILITY.

A cup, presented by the president of the club, will be awarded by the committee to the vehicle showing the greatest number of reliability marks at the end of the contest.

TIRES.

Stoppages on account of tire troubles will not be counted against a vehicle. An accurate record, however, will be kept of all delays occasioned by tires. Such record will be published in the official report of the contest, and will state the exact nature of the mishap and the time necessary to repair the same. The entry blanks will require specific information of the tires on each vehicle, including maker's name, retail price, size, weight and whether single or double tube.

XV. SPEED.

(a) An average speed of eight miles an hour (exclusive of the non-penalized stops mentioned in Rule XII) must be maintained over the whole course to render a vehicle eligible for a certificate. A contestant falling below an average of eight miles an hour in any period (hulf day's run) will not receive any credit for that period.

(b) On passing a green flag, which will be placed on the right side of the road at the entrance to all towns, on the outward journey, no speed in excess of eight miles an hour will be permitted until a white flag is reached, when a speed not exceeding fifteen

miles an hour will be permitted.

No average speed for each day's run in excess of fifteen miles an hour will be rec-

ognized or permitted.

(c) Vehicles are not permitted to make up the time lost during penalized or during nonpenalized stops by exceeding an average rate of speed of fifteen miles an hour, but the time lost during non-penalized stops will be credited upon arrival at controls,

(d) The contest committee shall have power to disquality a vehicle for travelling at a speed, in any place, which they may consider excessive, without reference to these rules.



(e) Any driver, owner, nominator or manufacturer of any vehicle taking part in the contest who shall be disqualified shall have his or their names reported to the secretary of the American Automobile Association, and such driver, owner, nominator or manufacturer will be disqualified by said association.*

XVI.

OPERATORS.

There will be no restrictions as to operators of vehicles, but no change of operators will be permitted except within the confines of a control.

XVII.

PASSENGERS.

In classes A, B. and C each vehicle shall carry at least two persons, one of whom shall be the official observer appointed by the club. These may be changed and others substituted within the confines of any control, but if passengers be changed outside of control the vehicle will be subject to disqualification.

*RESOLUTIONS ADOPTED BY THE AMERICAN AUTOMOBILE ASSOCIA-TION MAY 6, 1902.

"Resolved, That any driver, owner, nominator or manufacturer of any motor vehicle who shall be disqualified or suspended by any club belonging to the American Automobile Association shall be disqualified or suspended by this association and prevented from taking part or participating in any event held by any club belonging to this association, until such time as the club disqualifying or suspending such person or persons shall see fit to revoke such disqualification or suspension.

"Resolved, That the name of any person or persons so disqualified or suspended shall be sent by the club disqualifying or suspending such person or persons to the secre-tary of the American Automobile Association, and shall by him be sent to each club belonging to the association.

"These resolutions to take effect immediately upon their passage."

XVIII.

CLASS; LETTER AND NUMBER.

(a) Each contesting vehicle must have securely attached to it in a conspicuous po-sition on both front and rear, or side, an official letter and number corresponding with the catalogue class and number. There the catalogue class and number. shall be no other mark or sign on any vehicle, other than the owner's initials and the manufacturer's usual name or number plates, as affixed to a vehicle when sold to a customer.

(b) Those having charge of vehicles will be held responsible for the numbers being in conspicuous positions and clearly legible at all times.

XIX.

ROAD REGULATIONS.

(a) All vehicles passing other vehicles going in the same direction must pass to the left, in accordance with the rules of the road, and vehicles meeting each other must pass to the right. If for any reason it is necessary for vehicles to travel on the left side of the roadway, such vehicles must cross to the right side, irrespective of the con-dition of the roads, as soon as signalled by an overtaking or an approaching vehicle.

Vehicles must signal one another when ap-

proaching in either direction.

(b) No vehicle shall be pushed or assisted by any other than its occupants under penalty of disqualification, except that the penalty for a vehicle being towed in any period

shall be disqualification for that period (a period being half a day's run).

(c) Contestants shall be responsible for any violation of law and for all civil and criminal penalties.

(d) Contestants must comply with the traffic regulations of the local police.

(e) if a contestant fails to stop his vehicle on request from the driver of a frightened horse, or in any manner shows hilmself inconsiderate of other users of the roadway, his vehicle shall be subject to disqualification.

(f) Contestants shall inform themselves thoroughly in regard to the route, and no allowance will be made for any mistakes they may make.

(g) No contestant shall take any route other than that laid down in the official maps, which will be furnished for each stage.

MUFFLERS.

Every vehicle will be required to have an efficient muffler, which must be attached to the vehicle. Running with open mufflers will not be permitted.

DISQUALIFICATION.

(a) Disqualification shall mean that on notice being served on any vehicle it shall cease to run in the contest, and shall not receive a certificate or mention in the records.

(b) A person on receiving notice of disqualification shall withdraw his vehicle and immediately remove the official number therefrom.

(c) No notice of disqualification shall be served unless the person in charge of the vehicle has first been notified of the act which it is claimed should disqualify the vehicle. If the act be disputed, disqualifica-tion shall be postponed until the contest committee, at a meeting to which all concerned shall be invited, shall take evidence and render their decision.

(d) The person so disqualified shall have no claim on the club of any kind or nature whatever.

See Rule XV (e).

XXII.

PROTESTS.

Any one desiring to enter a protest must deposit with a member of the committee ten (\$10.00) dollars, which sum will be retained by the club if the protest is not sustained. He must submit his protest in writing, within twenty-four hours of the time, when it will be considered by the committee at the earliest practicable moment and decision rendered.

XXIII.

CERTIFICATES.

(a) The committee shall post the result of each day's run as soon as practicable, and may furnish the same to the press.

(b) Contestants shall not publish or communicate for publication any other times than those contained in the club certificate.

(c) In the event of subsequent alteration by the committee of the records on the certificates, owing to protests or other causes, the contestant will only publish the record as amended, on pain of disqualification.

(d) The certificates will recognize no speeds in excess of fifteen miles an hour, and will state as follows:

Official No.

Class.

Maker.

Entered by.

Weight.
Tires: Make, weight, size, single or double tube and retail price.

Number of passengers carried,

Distance.

Average miles per hour for the six days. Percentage of reliability mark.

AWARDS.

Certificates will be awarded by the club as follows:

First class certificate, average speed from 12 to 15 miles per hour.

Second class certificates, average speed from 10 to 12 miles per hour.

Third class certificates, average speed from 8 to 10 miles per hour.

STAGES.

The total distance is to be divided into stages for each day as follows:

Stage.		Miles.
First From	Clubhouse to New Haven	79
SecondFrom	New Haven to Springfield	68.6
ThirdFrom	Springfield to Boston	96.6
(Rei	maining in Boston one day.)	
FourthFrom	Boston to Springfield	. 96.6
FifthFrom	Springfield to New Haven	68.6
SixthFrom	New Haven to New York	. 79
Total	•••••	499.4
1001	• • • • • • • • • • • • • • • • • • •	100.1

XXVI.

FINISHING OF THE CONTEST.

The finish of the contest will be made at the flag in front of the clubhouse, No. 753 Fifth avenue, corner of 58th street, New York.

THE ITINERARY.

The itinerary is as follows: October 9th first day, New-York to New Haven, luncheon at Norwalk; October 10th, second day, New Haven to Springfield, luncheon at Hartford: October 11th, third day, Springfield to Boston, luncheon at Worcester; October 12th, fourth day, Sunday in Boston; October 13th, fifth day, Boston to Springfield, luncheon at Worcester: October 14th, sixth day, Springfield to New Haven, luncheon at Hartford. October 15th, seventh day, New Haven to New York, luncheon at Norwalk.

Speed in South Orange.

An ordinance is under consideration by the board of trustees of South Orange, N. J., relating to the speed of automobiles. The maxumim speed permitted by the proposed ordinance is 15 miles an hour, and if a horse appears to be frightened by the vehicle the chauffeur must stop his carriage, if requested by the driver of the horse, unless, in order to avoid accident, it shall be necessary to continue moving.

The racing of motor vehicles is prohibited. A lamp must be attached at night and an alarm must be sounded, which shall be loud enough to be heard for 300 feet.

A fine of \$50 or imprisonment for ten days or both is provided as the penalty for the first violation of the ordinance, \$100 fine and ten days' imprisonment for a second violation, and \$200 fine and imprisonment for not less than one day nor more than thirty days for a third violation.

The properties at 142 to 150 West Fiftythird street, this city, have been purchased by M. D. Rothschild. It is supposed that an automobile storage station will be erected on the plot.



WONDER WORKING GAS

Discovered by the Messrs. Russell, it Will Displace Gasolene—Liquid Air Outdone.

Automobilists need not worry any more about the difficulty of obtaining gasolene, its varying quality or its high price. They are about to have offered to them a substitute for the volatile and evasive fluid, a substitute that will be far and away better than the product it supplants.

Two New Yorkers, W. H. Russell and his son, George E. Russell, are the men who are going to revolutionize the gasolene vehicle industry.

They have succeeded in obtaining a gas from chemicals that works well in a combustion motor and at less than half what it would cost to secure the same power from gasolene, they state.

The discovery is of the greatest importance to the automobile trade in general and the gasolene engine industry in particular, since it makes the use of gasolene entirely unnecessary, the account continues. A carriage equipped with a tank of the new gas has been in successful operation for the past month, surprising experts who were inclined at first to scoff at the idea. The general efficiency of the motor with the gas, the absolute safety, for the gas is without pressure, and the simplicity of its application are matters of general surprise to those who have seen the carriage in operation.

"My discovery is the result of thirty years of study in chemistry, assisted by my son, who is a mechanical and electrical engineer," said W. H. Russell, "and I seel sure I have solved the problem of running an automobile with hydro-carbon and chemicals, which means absolute safety and greater economy.

"The most important feature of the invention is its safety. The regular gasolene motor is used, but there is no gasolene tank under the seat that may leak and result in a fire. This gas, which is created from various hydro-carbons and chemicals, is formed in a small tank similar to that used for ordinary oxy-hydrogen, but is absolutely without pressure. It is generated by an air siphon that acts only when the engine is running. There can be no condensation or odor and the mixture is non-explosive except by a spark under cylinder compression. I call it electro-safety gas.

"Economy is always an important factor," continued Mr. Russell, "and it predominates in the use of gas which can be used to advantage in automobiles and launches. The gas will furnish light, heat and power. Ab ut one hundred 16-candle power electric lamps can be operated at a cost of 10 cents an hour. An 8-pound tank measuring 8 by 15 inches, will run a 4 h. p. vehicle 150 miles, and enough gas can be carried, if desired, to tan an automobile for 5,000 miles. It costs about half a cent per horse power per hour. The strongest recommendation for this power is the fact that gas is generated only

when the machine is running, and that it is absolutely without pressure. Tanks can be changed in a few minutes. They can be put on any automobile now in use."

The machine which has served as a working model for the new power is rather a crude affair, which makes its operation even more creditable. A carriage body has been placed on the frame of an ordinary quadri-

Weighs but 180 Pounds.

Although weighing but 180 pounds, and being, therefore, one of the lightest automobiles ever built, the vehicle shown is capable of attaining a speed of twelve miles an hour. It is claimed to be thoroughly practical, having been run several hundred miles.

Writing to the Motor World, its builder, Fisher Morehouse, Naples, N. Y., has this to say regarding its construction:

"The ignition is by variable jump spark, and current is generated with a primary battery of four Samson cells, which I succeeded in sealing up with adhesive tape and sealing wax.



"I first used a much advertised semi-dry battery, which soon dried out and gave me much trouble before I could locate it. In my present battery I think the motion of the carriage assists in removing the hydrogen gas bubbles which form on the carbon, so I think it is best to remove from the centre of the carbon cylinders a part of the manganese oxide, which is placed there as a depolarizer, and this gives more carbon surface for collecting the current, which is generated by the two other elements. This battery will recuper ite quickly if overtaxed.

"The carburetter is made by using a generator valve and attaching it to a 3x3 inch cylinder which contains ten layers of fine wire gauze, on which the sprayed gasolene spreads over and is thoroughly vaporized by the inrushing air, which forms a mixture that gives a sharp explosion and a clean exhaust. The needle valve acts as a throttle."

cycle, to which is attached a Canda gasolene motor, said to be of 2¾ h. p.

The important factor in the carriage is a round tank of tin about 15 inches long and 8 inches in diameter, carried in the body just back of the seat. It contains the chemicals for creating the gas, and the tank and fittings do not weigh more than 8 pounds. From the end of the tank a %-inch pipe runs along the right side of the body to the dashboard, where there is a valve to regulate the flow of gas and an opening which draws in

the air. The pipe runs back, inside of the body, to the motor. An air syphon is attached to the left end of the gas reservoir, which draws in the air that acts on the chemicals. The syphon is worked by the motor

The engine is "turned over" by the quick pulling of a lever from the seat, similar to the method employed on all gasolene carriages. The ignition is governed by a small sliding rubber block in the steering rod, enabling the operator to increase or decrease his speed by advancing or retarding the spark. The speed can also be regulated by operating the valve of the gas supply pipe. Except for the absence of any odor, the machine in operation appears the same as any gasolene automobile.

When the engine starts it draws air to the chemicals, which generate a gas. This is forced through the pipe, taking in air near the dashboard and the complete mixture enters the motor and is exploded under compression by a spark from a dry battery.

Mr. Russell said that with universal connections on all automobile tanks could be obtained and used in any town, or they could be shipped from a central station and kept on hand for emergencies. He claims the efficiency of the gas is never impaired by age or climate.

Changed his View of Steamers.

Last week President W. E. Scarritt of the American Automobile Association returned from a trip to Hartford and return. He was accompanied by Mrs. Scarritt, and both were much pleased with their run.

"Until I got the White I said I would never have another steam carriage," said Mr. Scarritt to the Motor World man. "Sinec then, however, I am of quite another mind.

then, however, I am of quite another mind, "On the trip I did nearly 350 miles without touching a nut or any other part of the carriage or engine. It behaved beautifully. On the return journey I covered 145 miles—from Hartford to East Orange—in one day. It was a delightful ride."

The G & J Tire Girl.

Artistically draped in a flowing Greek robe, but too much of a brunette to resemble in other respects a Hellene maid, the G. & J. tire girl looks one laughingly in the eye. It is long odds that with such an advance agent the sales of G. & J. tires would be many times greater than they are. The hanger can be had for the asking.

A Desirable Customer.

Some idea of the enthusiasm shown by George C. Cannon, whose steam racing car was the feature of the Long Island Club's meet, can be formed when it is known that he purchased from Charles E. Miller, New York, nearly \$2,000 worth of parts. In fact, the car referred to is made up almost entirely from Miller fittings.

During the G. A. R. Encampment

Ther is a plan on foot to hold an automobile meet at Washington, D. C., during the G. A. R. week, early in October. A parade and a race meet are projected in connection with it.



Campaigning With an Automobile.

Although not the first time the automobile has been used for electioneering purposes, the Prohibitionists of Minnesota are going a good many steps further in the matter than any one else has done. They will tour the State during the approaching campaign in a giant automobile, with accommodations for a number of "spellbinders," a male quartet and a brass band.

It is the belief of the Prohibitionists that the horseless wagon will "give them the ears" of ten times the number of voters they could hope to reach by the old method of holding meetings in halls and opera houses, and that it will enable their candidates to much more thoroughly cover the territory comprising their several constituencies.

The automobile has four seats, each wide enough to accommodate three persons. On one side, between the wheels, is a small platform for the speaker.

The machine is fitted with a 28 horsepower gasolene engine, and with wide, solid rubber traction tires especially adapted to carry the auto over almost any condition of road. It will maintain a speed of from ten to twelve miles an hour on average country roads, and is guaranteed to carry its big load up a 40 per cent grade.

The plan of the "cold water people" is to put the machine at work at the State fair at Minneapolis in September, and immediately after to start on a tour of the State. The candidate for Governor on the Prohibition ticket, Charles Scanlon, will be with the company most of the time. Towns to be visited will be posted with announcements of the coming of the vehicle.

The campaigners will roll into the town as near schedule time as possible, take a turn around two or three blocks to the blare of their brass band, swing up on the busiest corner, and foist their Prohibition oratory on the voters.

Another Gasolene Inventor.

There is nothing new under the sun. The inventor of the first automobile is said to have been discovered in the person of Isaac de Rivaz, a Swiss engineer, who first drove a cart with a gas motor in 1804. After experimenting with another vehicle in 1813 the inventor took out a patent from the French Government, which document, it is declared, still exists, and proves beyond a doubt that De Rivaz conceived the idea of a gasolene automobile nearly a century ago.

To Show When Overheating Occurs.

For the purpose of indicating when the moving parts of the machinery have become excessively heated, a German inventor has devised a paint composed of an amalgam of the iodides of mercury and copper, which the inventor claims will change color when heated. Bearings to which it is applied are red under normal conditions, but when a temperature of 140 degrees Fahrenheit has been reached the paint becomes black.

Better Than a Horse Mower.

An automobile lawn mower and roller that has been used with complete success has been placed on the market by the Coldwell Lawn Mower Company, Newburgh, N. Y. During a recent trial on the lawns of the White House, Washington, D. C., its work elicited the highest econiums.

It is claimed for the implement that it not only does the work much quicker than can be done with either horse or hand mowers, but also much better.

The motor (enght-horse power), of the latest improved design, is the same as is used on an up-to-date automobile.

The machine complete and ready for operation weighs about three thousand pounds. It cuts a swarth 40 inches wide, and travels at the rate of from two hundred and fifty to

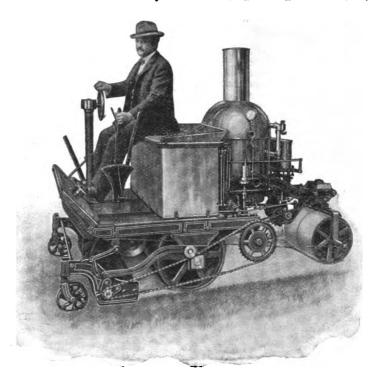
"Fools and Drunken Men."

"Coming back from Coburg and going down the hill to Villiers, which is very steep, and at which most chauffeurs adopt a reasonable pace, a large machine flew past, as though possessed of a devil," says a cablegram from Trouville.

"'There goes a lunatic,' said one on my machine. 'He will break his neck one day, and he is one of those who rush through the country at such rate that he loses control of his machine.'

"At this moment he was rushing at the rate of sixty kilometres an hour, at least, downhill through a populous town, where at both ends there stands a notice asking—indeed, ordering—automobilists to go slowly.

"A few seconds later this flying machine came to a sudden standstill. Its owner, as



five hundred feet per minute over an ordinary grade.

As a portable engine to be used for pumping water, sawing wood, etc., it is also very useful

Allays the Dust.

The use of crude petroleum on California roads is said to have been attended with great success. Carts are used to do the sprinkling, which is now only necessary about once in four weeks, as the macadam roads are so soaked that they are like hardwood floors. Water rolls off oiled roads like it does off a duck's back; there is little or no mud. Best of all, only a small quantity of oil is required, and the quality used does not cost more than a few cents a gallon. Automobilists can now appreciate the enjoyment of an automobile ride over the oiled boulevards.

Some people do not count the cost of neglecting a vehicle until the bill is overdue. far as I understand—he is "Tod" Sloan—had started downhill on third speed and suddenly turned on first. The result was a 'panne' disaster—a much approved of contretemps, because it is just this kind of scorching which makes automobiles so unpopular, while rational automobilists have to suffer for the sins of these people who apparently have no care for any one.

"So when news came that the Sloan outfit had broken down it was received with pleasure."

Brought Foreign Orders Home.

Upon his return from London a short time ago President Fischer of the Fischer Motor Vehicle Co. brought with him orders from two of the largest omnibus companies in that city for 'busses of the Fischer type. Several orders for heavy trucks were also booked. With the addition to their present plant, the factory space will be sufficiently large to enable the company to handle its increase of business.



The Week's Patents.

707,079. Feed Pump and Connection for Horseless Carriages. John C. Blevney, Newark, N. J. Filed Jan. 8, 1901. Serial No. 42,462. (No model.)

Claim.—1. The combination with the boiler, engine and pump, of a fulcrum, a lever, formed in sections, one of which is permanently fulcrumed on said fulcrum, and the other of which is free to slide in the first said section, the free section being connected both to the piston of the pump, the piston of the engine and to a handle, substantially as set forth.

707,169, Spring Tire for Vehicle Wheels. Henry C. Sherman, Providence, R. I. Filed Aug. 5, 1896, Serial No. 601,746. (No model.)

Claim.—1. In combination, a wheel rim having one central or two parallel grooves along its bed, a depression or well sunk below the surface of said bed or rim, with an opening passing through the centre of said depression, a tubular tire or pneumatic tube cover, and a boxing, occupying said depression or well in said rim, having a perpendicular shaft passing through said opening, said shaft having a bevel gear head gearing with two bevel gear headed screws, threaded alike, passing through opposite sides of boxing for the purpose of closing the telescoping ends of the tire or pneumatic tube cover with which ends said screws engage, substantially as described.

707,206. Body for Motor Vehicles. Ferdinand Charron and Léonce Girardot, Paris, France. Filed April 22, 1902. Serial No. 104,006. (No model.)

Claim.—1. A body for motor road vehicles with a back rotunda seat arranged at the back part of the carriage, closed at the sides and at the back, in combination with a front seat or driver's seat, one part of which can be lifted sidewise by pivoting on the stationary part, in combination with a door arranged at the side of the movable part of the seat, and in combination with a lever arranged beneath the movable part of the seat and pivoted to a stationary point intermediate of its length and with a bent rod pivoted by one end to the small arm of the lever and by the other end to the door, near the hinge thereof substantially as and for the purpose set forth.

707,230. Automobile. John C. Henry, Denver, Col.; Susie A. Henry, executrix of said John C. Henry, deceased, assignor to Stanley Electric Manufacturing Company, a corporation of New Jersey. Filed April 1, 1901. Serial No. 53,998. (No model.)

Claim.—1. In combination with an electric motor and a pressure operated motor, a planetary gear intermediate and connected to said motors, and to a device to be driven, and clutch devices arranged so that any one of said motors may be held stationary for the purpose set forth.

2. In a motor vehicle, the combination of a planetary gear connected to drive the vehicle, a fluid pressure motor and an electric motor connected respectively to different parts of said gear all arranged so that either of said motors may drive the vehicle independently.

707,254. Apparatus for Indicating when Certain Pre-determined Speeds Are Exceeded by Vehicles. Auguste F. Poillevillain dit P. Villain, Paris, France. Filed May 10, 1901. Serial No. 59,554. (No model.)

Claim.—In a device of the character described, a series of visible signals adapted to be displayed singly to indicate visually the limit of speed of the vehicle, a hand

lever adapted to set said visible signals, a governor controlled by the speed of the vehicle, a disk adapted to be rotated and to be elevated and depressed by the governor, an audible signal, a spindle adapted when rotated to operate said audible signal, a disk carried by said spindle and arranged adjacent to the governor disk and means controlled by the movement of the hand lever for varying the distance between the two disks independently of the up and down movement of the governor disk.

707,304. Motor Lawn Mower. Thomas Coldwell and William H. Coldwell, Newburg, N. Y. Filed March 7, 1902. Serial No. 97,095. (No model.)

Claim.—1. The combination with a motor carrying frame, provided with traction and lawn rolling rollers, supporting said frame, of a cutter frame, located in front of the said traction and lawn rolling rollers and provided with cutting mechanism and with ground engaging devices in constant engagement with the ground when the cutter is in operation for regulating the height of the cut, devices for raising the said cutter frame for transportation from place to place, and connections between the motor frame and cutter frame for transferring substantially the whole weight of the cutter frame when in operative position to the motor frame, to add to the effectiveness of the traction rollers, substantially as described.

707,340. Running Gear for Automobiles. Albert A. Medina, East San Jose, Cal. Filed June 10, 1902. Serial No. 111,051. (No model.)

Claim.—1. In a device of the class described, the combination with rear wheels provided with friction wheels, of friction pinions engaging the same, means for driving the friction pinions, steering mechanism, and means operated by the steering mechanism for moving the pinions simultaneously in opposite directions to arrange them at different distances from the centres of the friction wheels, whereby the rear wheels are driven at different speeds, substantially as described:

707,378. Tire for Vehicle Wheels. Edouard Belledin-Gras and Frederick Schaublin de Mondran, Paris, France. Filed May 10, 1902. Serial No. 106,805. (No model.)

Claim.—1. An elastic tire for vehicle wheels comprising superposed at springs, a tread surface with which such springs are connected at their periphery, said springs being curved to follow the inner profile of the mass constituting the tread, a series of central rings, one ring for each set of superposed springs with their respective central rings, substantially as described.

707,400. Transmission Gear for Automobiles. George P. Dorris, St. Louis, Mo. Filed April 4, 1901. Serial No. 54,294. (No model.)

Claim.—1. A power transmitting gear, comprising a power shaft, a number of forward propelling gears of various sizes and a rearward propelling gear mounted loosely upon the power shaft, a number of arms pivotally supported adjacent to each of said gears, a friction plate interposed between each of said gears and its adjacent arms, sleeves mounted to slide upon the shaft and each sleeve being adapted to operate the arms at a plurality of the gears at different times when the said sleeves are moved continuously in a given direction, to set the friction plates against the gears to hold the latter, so they will turn with the shaft, a clutch bar, means for operating said clutch bar, and connections between the clutch bar and the sleeves,

whereby they will all be moved simultaneously when the clutch bar is operated, substantially as specified.

707,435. Steering Gear for Automobiles. John G. MacPherson, Philadelphia, Pa., assignor to MacPherson Automobile Company, Phidalephia, Pa. Filed Oct. 26, 1901. Serial No. 80,120. (No model.)

Claim.—1. In combination with a vehicle, of a steering gear therefor comprising a hand lever, a bell crank lever operated thereby, a segmental gear operated by said bell crank lever, a vertical shaft, a gear carried thereby and meshing with said segmental gear, a worm gear operated by said shaft, a large gear meshing with said worm gear, and means operated by said large gear to steer the front wheels of the vehicle.

707,464. Locking Device for Vehicle Steering Mechanism. Cornelius S. Van Wago 1er, Cleveland, Ohio, assignor to M. L. Van Wagoner, Brooklyn, N. Y. Filed Sept. 6, 1901. Serial No. 74,533. (No model.)

Claim.—1. In a locking device for vehicle steering mechanism the combination of a friction clutch comprising a non-rotatable member adapted to be secured to the frame or body of a vehicle, and a rotatable member surrounding said non-rotatable member and adapted to be secured to a vehicle steering mechanism, means for normally maintaining said members in frictional engagement, and means for releasing such eugazement and imparting rotary motion to said rotatable member for moving said steering mechanism, substantially as described.

707,478. Valve Mechanism for Steam Carriage Burners. Rollin H. White, Cleveland, Ohio, assignor to the White Sewing Machine Company, Cleveland, Ohio, a corporation of Ohio. Filed April 19, 1901. Serial No. 56,542. (No model.)

Claim.—1. A valve casing having an inlet opening, a discharge nozzle, and a valve seat between them, and a valve having a screw threaded connection with said casing, combined with a bracket having two integral bearing sleeves, two shafts respectively mounted in said sleeves, intermeshing bevel gears secured to said two shafts, and operative connection between one of said shafts and said valves, substantially as specified.

12,021. Gas and Steam Convertible Engine. Gustave Dahlberg, McDonald; Jacob Clicquennoi, Taylorstown, and Ernest Uhlin, McDonald, Pa., assignors, by direct and mesne assignments, to D. C. & U. Gas Engine Company, Washington County, Pa. Filed Aug. 7, 1901. Serial No. 72,279. Orlginal No. 633,338, dated Sept. 19, 1899.

Claim.—1. In a convertible engine, the combination, with a cylinder having a piston therein, of a steam chest or fluid chamber in communication with the cylinder, means for introducing and compressing an explosive mixture in the chest, and a passage for the compressed explosive mixture leading from the chest to the cylinder, substantially as set forth.

Absurd Speed Oreinance.

An automobile speed ordinance has been introduced in the Binghamton (N. Y.) Common Council. It fixes the maximum speed of these vehicles at the absurdly low figure of seven miles an hour. Bicycles and tricycles are permitted to go at the rate of eight miles. The penalty is \$25 for each violation.



Horses and Their Ways.

"I can tell what a horse is going to do long before the driver can," says C. F. Bishop, who has done so much at Lenox, Mass., to accustom fractious horses to automobiles.

"I have studied their ways, and from the moment they catch sight of this automobile I am better prepared what to do than is the person driving the horse. Mr. Shattuck, the president of the Automobile Club, maintains that when a horse is badly frightened the automobilist should come to a full stop. I have to differ with him there, although I frequently do stop, for then it is up to the owner or driver to pass the automobile, and my responsibility with the machine is at an end.

"I think the better way to do is to slow down and gradually creep up on the horse. They have got to go by, and I gain foot by foot on the horse each time he pauses, if he is frightened; by that means you are up and past the horse before he really knows it. I find that a horse that shies at an automobile only does it a few times. That may seem strange, but it is so, and my experience of threee years in operating an automobile has given me almost every kind of an experience in meeting horses.

"The danger in meeting a frightened team is that they will turn around or rear backwards. I can tell instantly that kind of a horse. This afternoon I met Chief Nicholson, of Pittsfield, on Snake Hill, with a pair of spirited young horses. The driver handled them well, but had women been in the vehicle there would have been grave danger.

"I believe that most of the accidents and most of the trouble are due to inexperienced persons handling automobiles."

"Tod" Sloan, His Opiniors.

There are many kinds of records. That for convictions for fast driving is claimed by the jockey, Tod Sloan, who declares that he has had twenty-one proces verbals. This being so, it is not surprising to learn that the redoubtable "Tod" is "going in" strong for motor racing, and that he means "to make as great a name in motor car racing as he has attained in horse racing." He thinks that road racing for motor cars will shortly become the sport par excellence, and a much greater public institution than horse racing. The element of uncertainty which makes horse racing so attractive is present to a much greater degree in motor car racing over a long route.

To Contain the Edibles.

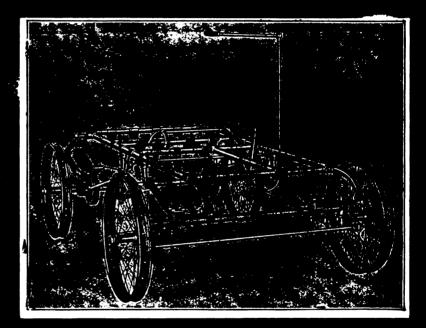
A refrigerator basket, lined with hair felt and asbestos and sheeted inside with metal, is offered to motorists by a local dealer, for carrying luncheons and refreshing beverages on tours and runs. This basket has a lid on each side, with a pair of handles for carrying, and in one end is a compartment for ice. The basket is almost air tight, so that a small quantity of ice will maintain a temperature of 58 degrees in the basket for twenty-four hours. It is made in two convenient sizes.

HERCULES RUNNING GEARS

FOR ELECTRIC AND GASOLINE VEHICLES

There are no weak spots in these gears.

Don't confound them with gears which have been hastily constructed to meet an early demand from automobile makers.



We also solicit orders for parts of these gears.

Their design is original and the construction is sound. Prices and particulars of construction sent upon application.

SMITH STAMPINGS FACTORY

Milwaukee & Wisconsin

Refused Their Request.

"We petition the Board of Chosen Freeholders of Hudson County, N. J., to appropriate about or above the sum required to maintain the Boulevard, the sum of \$100,-000, to be used by the Boulevard Commissioners to establish and maintain an automobile passenger line on said Boulevard for the convenience of the general public, whose wealth is not large enough to buy an automobile or carriage, and also request that the Boulevard Commissioners be requested to ask for the said amount for the foregoing purpose."

Touching as the above request of the Amalgamated Sheet Metal Workers, International Association, of Jersey City, N. J., was, the hard hearted Boulevard Commissioners of Hudson County will not grant it. This notwithstanding it was backed up by a similar request made by the local assembly of the Knights of Labor. Perhaps the fact that the slieet metal workers belong to Local Union No. 13 had something to do with it.

At any rate, the officials petitioned returned a negative answer, from which this extract is taken:

"There is no statute of New Jersey authorizing the boards of chosen freeholders to expend public moneys in the purchase of automobiles, carriages or other vehicles and hire them out for public use, and without such a statute the freeholders could not comply with the above request.'

Will Extinguisn all Fires.

There is no lack of decision in Chief Mc-Connell of the Buffalo (N. Y.) Fire Department. He will hasten to the aid of automobilists whose vehicles are on fire quite as readily as if it were a house that had been attacked.

An automobile took fire last week, and an alarm was turned in from a nearby fire box, which brought four engines and hook and ladder trucks to the scene. Chief Mc-Connell of the Fire Department was asked if there were any objections on the part of the Fire Department officials to the alarm having been sent in which called the four fire companies to the scene of the automobile

"None whatever," replied the Chief, "and in fact we consider that the automobile owner had just as good a right to call on the Fire Department to assist in extinguishing the fire in his automobile as any other citizen has to call upon us to save his house, or his barn, or his place of business.

What Eby Will do.

"Milton Eby, hostler at the Nutting stables at Fourth and Chestnut streets, displays a miniature model of a new style automobile which he has built during his spare moments," gravely remarks the Lebanon (Pa.) Report.

"He asserts that he will outclass several of the other types, and will have an engine built which will be attached to the body and other fixtures, which he will build in the mean time. Within seven or eight months, he asserts, he will astonish his friends in this city by a horseless carriage of his own design.

Seek Cause of Death.

At Cottage City, Mass., a case of interest to automobilists is being heard. Edward A. Milliken is charged with manslaughter, in having caused the death of Ariel P. Scott by frightening the latter's horse with an automobile. An effort will be made to show that Scott's death was caused by being thrown from his carriage, his horse having been frightened by Milliken's automobile. A chief cause of his death was a congestion of the lung, which Dr. Worth, a witness for the prosecution, said might have been caused by an accident.

Artillery Wheels.

We are now prepared to furnish these Hubs, Ball-Bearing and Key-Seated, for Automobiles weighing from 500 to 4,000 pounds.

Front Hubs are Ball-Bearing and are assembled on our well-known Steering Axles. Rear Hubs furnished with Ball-Bearings or Key-Seated.

> ALL RACES ARE GROUND IN POSITION IN HUBS. CONES AND CONE SEATS ON SPINDLES ARE GROUND TO GAUGE.

Hubs and Spindles are machined Right and Left.

WRITE US REGARDING YOUR REQUIREMENTS.

THE AMERICAN BALL-BEARING COMPANY, Chio, U.S.A.

The Prescott Steam Touring Cars.

In the Automobile Club of America's 100-Mile Endurance Contest on Decoration Day, between New York and Southport, Conn., and return, the Prescott Steam Cars were awarded FIRST CLASS CERTIFICATES.

FOR TWO PASSENGERS .-- FRONT CLOSED

BY THE FOOT.

SUPERHEATED STEAM.

RUNNING GEAR New Design-Extra Heavy.

NEW INDESTRUCTIBLE BURNER.

STEAM AIR AND STEAM WATER PUMPS, Both operated from the seat.

In the Speed Trials on Staten Island Boulevard, May 31st, one of the Pres REVERSE LEVER OPERATED cott's that made the Endurance Run, a regular stock machine, nothing special on it, made the mile in 1:37 1-5, thus proving conclusively that the Prescotts are safe, speedy and reliable.



These and other refinements, added to the Prescott Performances in the above Two Events, prove our straight-out claims that Prescott Cars are reliable under all conditions.

PRESCOTT AUTOMOBILE MFG. CO., 83 Chambers Street, New York City.



"WHITNEY"

CHAINS

ARE MOST DURABLE.

THE WHITNEY MFG. CO. - Hartford, Conn.

America's Leading Automobile

WHEEL

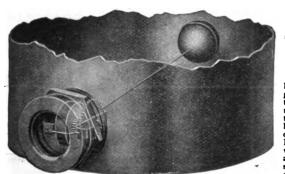
JONES BEST

PHINEAS JONES & CO.,

301 to 313 Market St., - NEWARK, N. J.

ESTABLISHED 1855

DON'T GUESS



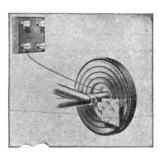
JUST USE OUR

Tell Tale

The only device of its kind. Always tells at a glance all the gasolene that is on hand. Can be tradily applied to the tank on any style of vehicle. Saves waste and quickly earns its price. Loss of air pressure, worn threads on plugs and fire dangers on steam vehicles entirely eliminated.

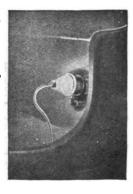
JOHN SIMMONS CO., 104-110 Centre St., New York

INSURE Against Annoying Police Mistakes.



The Mott Speedometer

will enable you to ride up to the full, local, legal limits. There are 4 speeds and they can't be disputed.



Night riding is Safer, Pleasanter, Easier, when you have a Mott Cage Illuminator. We'll tell you more of what they tell you if you will write LAURENCE MOTT, 106 Sudbury St. Boston.

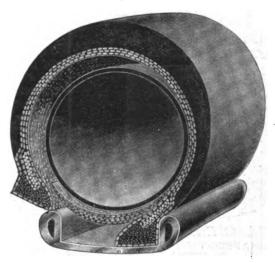


TWO WONDERS:

The Wireless Telegraph

AND THE

Woven-Wired Goodyear Tire.



If you have not informed yourself regarding the wonderworking of that woven wire imbedded in the

GOODYEAR Detachable Tire,

you have something to live for and to learn—something that will add to your pleasure and profit alike.

THE PRESENT IS A GOOD TIME TO AGQUIRE THE INFORMATION.

GOODYEAR TIRE AND RUBBER CO., AKRON, OHIO.

5-6-7 Singer Street, London.

BOSTON, 6 & 8 Merrimac St.

CINCINNATI, 722 Mais St. CHICAGO, 86 Lake St. ST. LOUIS, 1219 N. Broadway.

MINNEAPOLIS, 21 South Second St.

DETROIT, 246 Jefferson St.

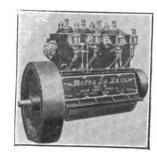
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8 H.P. 4 Cylinders.

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GASOLENE TANKS.
STEEL SHAPES STAMPED OR DRAWN.

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Would bar Them From the Roads.

Prefacing his suggestion by the remark that automobiles "are not a necessity to their owners, because any one who can own an auto can instead own a first class turnout," a Great Barrington (Mass.) man starts a campaign against automobiles. He wishes them kept off the roads altogether, the first offence of this kind to be punished by fine, the second by the breaking up of the automobile!

"Now, since it is a fact that legislation in favor of the automobilist is detrimental to the interest and safety of the public, it certainly must be acknowledged that such legislation is not only unwise, but directly opposed to the fundamental principles upon which our government was founded," he says.

"Now, you will inquire how I propose to secure the desired legislation. I would suggest that a man in each town in the commonwealth be employed to interview every voter in the town and induce as many as possible to sign an agreement that he will vote for no candidate for either branch of the legislature who will not pledge himself (by publishing the fact in a local paper that has a good circulation in his district) to use his influence and vote to secure the enactment of a law prohibiting the use of autos upon any highway in the State under penalty of a heavy fine for the first offence, and that for the second offence the fine shall be increased and the automobile be destroved as effectually as the liquors of an unlicensed liquor dealer.

"tA first thought this may be considered somewhat arbitrary legislation, but when you consider that at present it is absolutely unsafe to venture upon our highways, and that it is a dangerous practice for farmers' wives to take small children and drive to market because of the presence of the automobiles, and also the unpardonable indifference manifested by the proprietors thereof when an accident occurs, I think you will admit that existing facts justify strict and stringent remedies."

Ten miles an hour is the speed limit for automobiles on Atlantic County, N. J., roads. An ordinance fixing a \$25 penalty was adopted by the Freeholders last week.

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Standard Gasoline Motors and Automobiles of the World.

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will impart this very knowledge.



108 PAGES; 36 ILLUSTRATIONS.

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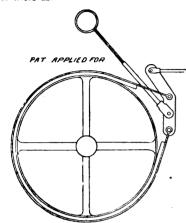
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IF A BRAKE BREAKS

ALMOST ANYTHING MAY HAPPEN.

You may think your present brake is efficient. If you have this one you know it is.

The difference between thinking and knowing ought to be vital to you Better be sure than sorry Better write us.

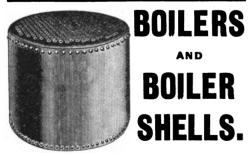


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as valves, etc. Write for Prices and Catalogue.

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Water on the "Buzzer."

A case where a big automobile was literally brought to a standstill by a few drops of water in the wrong place recently came to notice.

The engine was of the two-cylinder type and seemed to falter on one cylinder, finally skipping so that there was no explosion at all in that cylinder. It became necessary to stop the car, but for a long time the search for the source of the trouble was unsuccessful. The coil was found to be properly adjusted, the battery was new, the sparking plug had been recently cleaned and only used for a few miles, and everything necessary to produce the explosion was all right, so that the trouble evidently was in the wiring system.,

Every wire was followed from terminal to terminal and found unbroken, and finally as a last resort the "buzzers" were turned in the movement of advancing the spark to the slot in the timing can, and one buzzer was found to be so saturated with water which had leaked from a poor cap on the water jacket that no spark occurred whether the cam hit the slot or not. A few drops of gasolene cleaned the point and enabled the vehicle to proceed.

When Fur Garments are Necessary.

"In late autumn and winter fur is absolutely essential to comfort," says A. J. Eddy. "Even at fifteen or twenty miles an hour the wind is penetrating, and goes through everything but the closest of fur. For women, fur or leather lined coats are comfortable even when the weather seems still quite warm. Leather coats are a great protection against both cold and dust. Unhappily, most people who have no machines of their own, when invited to ride, have nothing fit to wear; they dress too thinly, wear hats that blow off and they are, and look, quite unhappy-to the great discomfort of those with them." Mr. Eddy says it is not a bad plan to have available one or two heavy lined coats for the benefit of guests.

Automobile races will be a feature of the Worcester (Mass.) fair. September 1 and 2 are the dates set by the Worcester Agricultural Society.

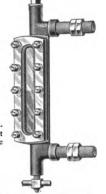
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Our boilers received first prize for lowest fuel consumption in Long Island Endurance Contest Cannon's racing car equipped with our 24 inch boiler, made 1-2 mile in 29 4-5 seconds. 300 lbs. steam at start, 305 lbs at finish 5 miles in 8 minutes, 26 3-5 seconds.

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6 H. P. ACTUAL.

\$850.00 with Wire Wheels. \$900.00 with Artillery Wheels.

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STEARNS CARS ARE WORTH MORE THAN THEY COST.

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15 cents per line of seven words, cash with order.

FOR SALE.—1 Waverley Runabout, \$450; 1 Mobile, high back, \$300; 1 Locomobile, \$290; 1 Orient Motor Bike, 23/h, p., \$125. (These prices are very low in order to move machines at once.)
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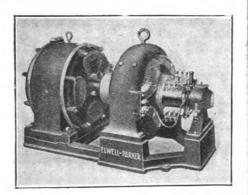
Marsh \$125. All new and uncrated. 2 3:4 Orient
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FOR SALE—A 1 1-2 h-p. 230 volts Electric motor. Good condition. \$60. H. M. P., care Motor World.

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Gasmobile Surrey, with rumble seat. Finish white. 12 h-p. motor; 3 cylinders 4 1-4 x 4 I-2. Two speeds forward and reverse. Wheel steering. Tires, Diamond 32 x 4. Has been run less than 500 miles and is in good running order. Very cheap Must be sold at once. For particulars, address F. S., care Motor World.





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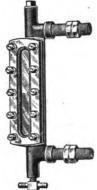
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Makers of RELIABLE Steam Carriages.

If you are not familiar with the exclusive features of

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7½ H. P. Engine.

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All the vehicles, large or small: large carriages, light carriages, wagonettes, etc., are wiped out by the light vehicle!

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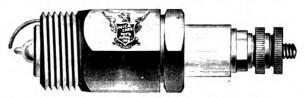
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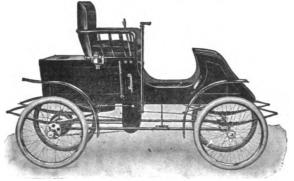
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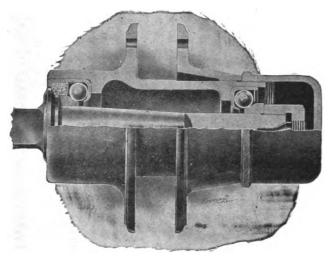
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It is the only "steamer" in existence that has covered 100 miles without a stop for water or fuel. Its 100 mile non-stop record: 6 gallons of water, 5% gallons of gasolene.

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One Mile, 1:09 3-5.

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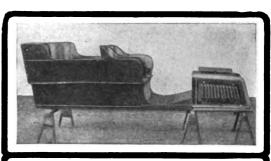


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## THE MOTOR WORLD.

## A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, September 11, 1902.

No. 24

#### TIRE MAKERS CLASH

#### G & J Sue Diamond—Infringement of Detachable Type Alleged—Injunction Asked For.

After having been impending for a number of months, the long threatened tire war has broken out, and involved in the initial battle two prominent concerns. The G. & J. Tire Co., Indianapolis, Ind., has brought suit against the Diamond Rubber Co., Akron, O., alleging infringement of its patents and praying for an injunction and an accounting.

The action grows out of the manufacture by the defendant company of a detachable form of tire, a tire similar in many respects to that produced and marketed by the plaintiffs. The latter is attached and detached by mechanical means, being provided with beaded edges, which engage with a rim shaped especially to receive them, and are so held in position by the air pressure that no cement or other fastening appliances are required. From its ease of repair, consequent upon this method of attachment, this type of tire has entered into extensive use in the automobile trade.

The papers in the case are dated August 28, and are returnable on the first Monday in October in the Circuit Court of the United States, Southern District of New York. They bear the signature of the G. & J. Tire Co., by Harold O. Smith, vice-president and treaserer. Ernest Hopkinson, of this city, is counsel for the complainants.

It is set forth in this bill of complaint that Thomas B. Jeffery invented and patented what afterwards became known as the G. & J. tire, in 1891; that he subsequently took out four more patents on tire improvements, and that one Golding, an Englishman, did the same on a somewhat similar tire. Subsequently all these patents were acquired, after several changes of ownership, by the G. & J. Tire Co. The act of the Diamond Rubber Co. in making a tire alleged to infringe the G. & J. is then recited, together with the fact that the said company was expressly warned not to do so. After recount-

(Continued on page 686)

#### Large Demand for Space.

Although the dates set for the holding of the third annual automobile show at Madison Square Garden, this city, viz., January 17 to 24, are still some distance off, the management has been actively at work on the preliminary arrangements. The prospectus and diagram showing spaces were sent out last week, and so instant and hearty was the response that almost one-half the spaces were applied for immediately.

This large demand, and dissatisfaction with the arrangement of the spaces, has led the management to make a complete change in its plans. A new diagram will be made, and the arrangement will be such that the rear spaces, which were deemed undesirable by most exhibitors, will be done away with, and an aisle for the use of the audience run around the building in their place. The new diagram will be sent out as soon as possible.

The show will be held under the joint auspices of the Automobile Club of America and the National Association of Automobile Manufacturers. The management will be in the hands of the Madison Square Garden Co., Frank W. Sanger, manager.

#### Dinsmore Won First Place.

Another American has won a victory abroad, this time in a hill climbing contest. A 40 horse power Mercedes, belonging to Clarence Gray Dinsmore, whose chauffeur was Werner, carried off the honors, making the climb in 10 minutes 37 seconds. A Laudin Clemens automobile did the distance in 10 minutes 38 seconds, and a 15 horse power Serpollet, piloted by Leblon, the only Frenchman in the race, was third, in 10 minutes 39 seconds.

Semmering is in a locality that affords ample opportunity for testing the hill climbing abilities of an automobile. It is close to the boundary between Austria and Styria, and the mountains known as the Semmering range are a spur of the Styrian Alps. One of the most interesting mountain railroads in Europe runs from Gloggnitz to Bruck, passing through Semmering, which is a favorite summer resort with Austrians.

#### **CURRIER IN CONTROL**

## Gasmobile Plant is Sold and Reorgonization Will Probably Follow—Price \$100.000.

In accordance with the decree of the Court of Chancery of New Jersey the plant and property of the Automobile Co. of America, Marion, N. J., was sold at auction on Monday last by Receiver H. C. Cryder.

The purchaser was Richard Currier, of this city, whose bid, the only one received, was \$100,000 for the entire property, subject to two mortgages amounting to \$65,000 and unpaid taxes and interest amounting to \$3,000. The company's liabilities are about \$210,000.

It is understood that the purchase was made on behalf of the Automobile Co. of America, and that Currier was one of their representatives. Plans for a reorganization of the company are being considered, a gentleman qualified to speak with authority ascured the Motor World man, and if they are put through, as there is reason to believe will be the case, the new company will come into possession of the plant again and continue the business.

It had been expected that the reorganization would be decided upon this week, but owing to unexpected delays the matter will go over for about a couple of weeks.

#### Trustee Filed Account.

Trustee Dalzell, of the Steam Vehicle Co. of America, has filed his first account, and it will be called for passing upon and declaration of dividend on the 20th day of September at 10 o'clock, before C. H. Ruhl, Referee in Bankruptcy, at his office, 534 Washington street, Reading, Pa. The same day has been fixed for an examination of George Alfred Lamb, treasurer of the bankrupt company.

#### For Members Only.

Among the events to be run off at Detroit, Mich., on September 20 is a five-mile challenge cup event, open to all classes, for which only members of the American Motor League are eligible. The cup is offered by the Diamond Rubber Co.



#### **DEAUVILLE'S TIMES**

## Suggest That Official Recognition be Awaited Before Given too Much Credence.

French Bureau Motor World,
2 Rue d'Abbeville.

Paris, Sept. 5.—The Deauville meeting is leaving an aftermath of doubt and suspicion which makes it desirable perhaps not to place too much reliance upon the extraordinary times of the vehicles until their accuracy has been officially put beyond all question. The most surprising thing is not that the records should have fallen like a house of cards, as in the present state of the industry anything is possible in the way of speed, but that this should have been done under conditions which are not so favorable as those obtaining on some of the other speed tracks.

The makers know very well what their cars are capable of doing. By calculating the weight, resistance and horsepower they can gear to a given maximum speed, and if this is to be exceeded it can only be done under special circumstances, such, for instance, as an almost imperceptible down grade or the blowing of wind from behind, and for short distances it is possible to get more power out of the motor by using a richer gas mixture and running it at exceptionally high speed, which, if long continued, would inevitably lead to seizing.

But even under these special conditions makers are surprised to find vehicles run at more than 84 miles an hour, and not only that, but there has been an unaccountable discrepancy in the performances of cars of the same make and of identically the same powers. Of course, the cars at Deauville were greatly favored by a strong wind blowing behind them, but this does not explain many things, and, though we do not say that there is anything wrong about the times, it is just as well to wait until the Automobile Club has passed the records before accepting them. A very close examination is being made of the time sheets, and if the Automobile Club is satisfied that everything is in order the marvellous times of the cars at Deauville may be accepted with confidence.

The reference above to motors seizing recalls a phase in automobile improvement for which the industry has not perhaps received due credit. Those owners who had anything to do with the earlier types of vehicles must have a lively recollection of a trouble which often took the gilt off touring, when after a long climb or an inattention to the lubrication the pistons stuck, with the natural consequence of considerable vexation and long delay. At that time it was a by no means easy matter to get a proper lubrication of the open motors and gears,

and in fact the importance of this question on the efficiency of the engine did not strike automobilists, who were often inclined to let the motors and driving gears take care of themselves, and there is nothing less capable of looking after itself than mechanism, unless it has a plentiful supply of oil, distributed in such a manner as to provide just the necessary quantities where it is wanted. 'Then the makers went to the other extreme and drowned all the moving parts in oil, with results that were nearly as bad, and the vehicle had anything but a presentable appearance, with oil dripping from everywhere and smothering those who travelled in the car.

All this has now been changed. More suitable lubricating oils have been prepared which do the work in a better manner with a much lower consumption, and the method of applying the oil has been so far improved that each part of the vehicle gets just what is wanted and no more, and is always sure of getting its due supply. This has been greatly facilitated by the enclosing of gears in dust tight boxes, so that nowadays there is rarely anything exposed, not even the valve gears, and the axle bearings and other parts are lubricated under pressure in a way to give the highest efficiency. The automobile now consumes much less oil, and with much better results, and you now rarely, if ever, hear of a motor on a high class car seizing.

After the speed tests we are going to have quite a series of hill climbing events. The history of these hill climbs throws a curious light upon the way in which things are done in France. The annual Giallon tests are or ganized by a green hued daily automobile paper, which two or three years ago raised a great outcry against racing, much to the annoyance of the Automobile Club, which founded an official yellow colored journal of its own. Since that time the yellow one has been fairly tomahawking its green rival, and every time the latter tries to organize an event of its own the official journal steps in with a competitive show.

This year the Gaillon test was to have been held on October 5. The yellow paper then announced that it would organize a similar test the following week. This competition did not suit the green 'un which tried to induce the local authorities to suppress the second meeting, and on hearing of this the yellow paper vowed it would carry on war to the knife. It is trying to draw away all the custom from Gaillon by holding a meeting at Chateau-Thierry on October 12. while it intends to pulverize and, figuratively speaking, wipe the floor, or the road, with its green rival by organizing another meeting at Gaillon on the same day as that fixed by its competitor. The latter has now changed the Gaillon date to September 28, and it will be interesting to see what will be the next move of the yellow paper. We have thus three hill climbing tests in prospect in three weeks, which is perhaps rather too much of a good thing.

#### RAPIDLY INCREASED

## Comparison of Changes in Horse Power and Average Speeds Abroad.

An interesting table of speeds has been drawn up by the Matin which shows how rapidly the average pace of motor cars has increased in the few years since they have become practical vehicles.

In the Paris-Bordeaux-Paris race of 1895, Levassor accomplished an average of fifteen and a half miles an hour on a 4 horsepower Panhard, a feat which was regarded as astonishing. Indeed, it was in view of such an achievement in a race that our legislators thought they were rather generous when in their act legalizing motor cars they fixed the maximum speed at fourteen miles an hour.

"In 1896, in the Paris-Marseilles-Paris race, Mayade on a 6 horsepower Panhard achieved sixteen miles an hour. These two were races of upwards of 750 miles, so that the test was severe; and, owing to the varying length of the contests from which the subsequent figures are gathered, it is not easy to make a true comparison, as the distances range from sixty-two and a half miles (one hundred kilometres) up to 329 miles of the Paris-Bordeaux of 1901. Jamin, on a 4 horsepower Bollée, accomplished twentynine miles an hour from Paris to Trouville in 1897.

"The next year showed no breaking of the record, but in 1899 Lemaitre, driving a 20 horsepower Peugeot, achieved thirty-two miles an hour in the Pau-Bayonne-Pau race. Later in the same year, Levegh, in the Bordeaux-Biarritz race, made a notable advance. scoring an average of forty-one miles an hour on a 20 horsepower Mors. The next year raised the figures several times. At Pau Réné de Knyff, on a 16 horsepower Panhard, averaged forty-four miles an hour; Jénatzy in a one hundred kilometre race, did forty-eight and a half miles in the sixty minutes, and Levegh, on a Mors, in the Bordeaux-Perigueux contest, was the first to average fifty miles an hour.

"In 1901 Fournier's pace in the Paris-Bordeaux race was fifty two and a half miles an hour, on a 60 horsepower Mors, and on the second day of the Paris-Berlin race of last year Antony, on a Mors, reached fifty-four miles an hour.

"Coming to the present year, Réné de Knyff has accomplished fifty-five and a quarter miles an hour on a 70 horsepower Panhard on the first day of the Paris-Vienna; while in the first one hundred kilometres of the Circuit des Ardennes, Baron de Crawhez, on a 70 horsepower Panhard, covered sixty and a quarter miles in sixty minutes. Thus, in eight years the average speed of motor cars over a long distance has increased from fifteen and a half to sixty and a quarter miles an hour."



#### SHOWN BY CENSUS FIGURES

#### How the Industry Stood Two Years Ago— Average Values Worked Out.

For the first time the builetin reports of the Census Bureau statisticians at Washington contain a chapter devoted to motor vehicles. The bulletin itself is on the special subject of the manufacture of locomotives in the United States during the year 1900, with a section devoted to motor vehicles.

This latter term, the report states, is intended to "embrace all classes of self-propelled carriages, wagons or trucks used for the conveyance of passengers or the transportation of merchandise." Of such vehicles, according to the report, 4,192 were constructed in the United States during the census year 1900, and their aggregate value, as reported by 109 manufacturers, was \$4.899,443, an average of \$1,168 to a vehicle.

"As but few of the establishments manufacturing motor vehicles were devoted exclusively to this work," the report continues, "and as, in many cases, their operations covered only a portion of the census year, or were not continuous during that period, it is impracticable to give any statistics relating to the industry beyond the quantity and value of the product."

The tabulated figures for the year 1900 show that Connecticut led at that time in the total value of output, \$1,899,592, for 911 vehicles. It is credited, however, with a vehicle. Massachusetts shows the largest number made that year, making 1,198 vehicles. It is only credited, however, with a total cash value of output of only \$789,892, or at the rate of \$659 per vehicle. Illinois, with 671 machines, valued at \$758,777, comes third on the list, the average value being \$1,131 per vehicle. Here is the division by States:

| Manu-            | Num-    |                |
|------------------|---------|----------------|
| facturer         | s. ber. | Value.         |
| ('alifornia 4    | 6       | <b>\$9,350</b> |
| Connecticut 4    | 911     | 1,899,592      |
| Illinois 6       | 671     | 758,777        |
| Indiana 4        | 55      | 61,915         |
| Maine 3          | 13      | 13,100         |
| Maryland 3       | 25      | 55,500         |
| Massachusetts 17 | 1,198   | 789,892        |
| Missouri 3       | 28      | 29,600         |
| New Jersey 8     | 248     | 452,655        |
| New York 21      | 624     | 471,547        |
| Ohio 8           | 188     | 240,600        |
| Pennsylvania 13  | 74      | 73,450         |
| Wisconsin 6      | 124     | 30,900         |
| Others 9         | 27      | 12,565         |
| Total            | 4,192   | \$4,899,443    |

These figures show some peculiar conditions in addition to that of Massachusetts, where the average value is only \$659 per vehicle, or twelfth in that list, although it stands at the head in the number of vehicles made. On average value figures, Maryland stands at the head, with \$2,220 per vehicle, and Wisconsin at the foot, with the astonishing figure of \$249. These conditions are, of course, abnormal, and due to the conditions of the industry at that time.

The average value figures of Connecticut, \$2,085, which stands second in the list, are undoubtedly of true value. as for the year that the figures are given, 1900, there was a large output of public service electric vehicles sold at good figures. The average figures of Massachusetts are undoubtedly influenced by the fact that during that year there were many experiments in that State running under company names, some of whom had wonderful ideas as to the low price at which they could list their vehicles.

The average values for the other States are: New Jersey, \$1,825; California, \$1,570; Ohio, \$1,280; Indiana, \$1,271; Missouri, \$1,057; Maine, \$1,007; Pennsylvania, \$992; New York, \$756; all others, \$465.

A comparison of the relative popularity of the three motive powers, steam, electricity and gasolene, or hydrocarbon, conclusively shows that conditions two years ago were not as they are to-day. Gasolene undoubtedleads in the total output of the three different classes of motor vehicles at the present time, and has led throughout the last year, but in 1900 it was a very poor third. The total value of the electric vehicles turned out in that year exceeded the combined total values of the other two powers, was three times as great as the total value of the gasolene output, and almost twice that of the steam vehicles, although the number of steam vehicles manufactured was greater. There were 1,575 electric vehicles in all, worth \$2,873,464; 1,681 steam vehicles, at \$1,147,927, and 936 gasolene vehicles, at \$878,052. The average values were \$1,824, \$683 and \$938, respectively.

The specialization in the manufacture of parts, a well known feature of the industry, and the consequent rather anomalous situation that most manufacturers do little more than assemble parts purchased from different makers, are noted. "Bicycle factories figure largely in the industry, and a considerable number of automobiles was constructed by carriage builders. A great many machine shops each built from one to half a dozen motor vehicles, mostly, however, in an experimental way."

"Notwithstanding the large number of motor vehicles constructed during the census year," the report concludes, after a description of the various types of boilers and motors, "the industry was only in the experimental stage, and its development promises to be as remarkable as the expansion of the bicycle industry. Few industries involving such a degree of mechanical skill and ingenuity, and presenting so many new problems for solution, have developed so rapidly, both in ideas and in commercial results."

#### The Week's Exports.

British East Indies.—2 cases motor vehicles and material, \$550.

British Australia.—6 cases auto vehicles, \$2,790.

Copenhagen.—1 case motor vehicles and parts, \$187.

London.—4 cases auto vehicles and parts,

#### **CLEVELAND'S RECORD MEET**

## Sensational Racing That Established Three New Track Records.

Cleveland, Ohio, Sept. 16.-Ideal weather and a perfect track, a crowd numbering over 12,000, overflowing the grand stand and bleachers, keen, intelligent and appreciative interest manifested on every side, marked to-day's opening races on the famous Glenville track. The racing itself was sensational in the extreme, world's records being badly shattered by both Alexander Winton and Rollin White, the former doing ten miles in 10:50, many of the miles being covered close to the flat minute, on the circular mile track, while the latter placed the five mile steam record to his credit, doing the distance in 5:54%. These two men and machines were easily the stars of the day. It is interesting to recall that on Decoration Day, 1887, Winton made the first American mile record on this same track, the time be-1:47.

To-day, as he reeled off miles in 1:02 and 1:03, the spectators held their breath, gasped, then cheered as he shot past Harkness and the much heralded Mercedes, his flying "Bullet" being truly named. It was a nerve racking performance, and stamps Winton and his latest creation as topnotchers. Not the slightest accident occurred to mar the day's great sport. Less sensational perhaps, but fully noteworthy in its way, was the performance of the White steamers. They far outclassed anything of their kind at present, winning everything within reach and adding hosts of friends. The famous Baker torpedo, too, was there, and gave an exhibition mile, but with no attempt at speed, slowly circling the track in 2:11. As expected, the Baker vehicles swept the boards in the electric class.

Racing began promptly at 2 o'clock, amid an animated scene, with machines lined up on both sides of the inclosured yellow dirt track, which was as smooth as the proverbial kitchen floor. The crowd was enthusiastic in spirit and anxious to see the good things to come. The first race was five miles for gasolene machines, 1,000 pounds or under, with three entries—H. S. Moore, in an Elmore; J. D. Dickson, in a Cleveland, and G. W. Burnham, in an American. Moore, in his Elmore, made a runaway race, going the five miles without hitch or skip, and winning by a quarter of a mile in 11:19½. Cleveland was second.

The second race was for five miles, steamers, all weights, with six entries. At the start Rollin H. White came with a rush from away outside, shot to the front, and for one mile it was a pretty race between him and L. E. Hoffman. At the end of the mile the latter faded away, White speeding noiselessly along well in the lead. In the second mile, apparently remembering he was in a hurry, he let out another link, easily lapping



#### a Locomobile and Hoffman, and won hands WILL APPEAL CASE

### a Locomobile and Hoffman, and won nands down in 9:53½.

The third race was for five miles, for gasolene vehicles, 2,000 pounds or under. The contestants were C. B. Shanks in the Winton "Pup," H. S. Harkness in his big Mercedes, Percy Owen and John Farson in Wintons, and L. P. Moore.

At the crack of the pistol Shanks shot ahead like a rocket, closely followed by Harkness. These two quickly drew away from the others, with the little Winton "Pup" going like a streak, and the powerful, ponderous Mercedes tearing along, and gaining momentum every second. Shanks led at the end of the first mile. At the second mile they were neck and neck, Harkness finally rushing past, thereafter holding the advantage and winning in 6:32%. Shanks was second and Owen third. It was later announced that the Mercedes was overweight, scaling 2,215 pounds, and was disqualified, the race going to Shanks. The former record stood at 6:42, by F. A. La Roche, in a Darracq, and made on the Brighton Beach track August 23.

The next event was a five mile exhibition by Rollin H. White, who furnished a faultless performance, beating the world's record by one minute, the time being 6:43.

The fifth event was for electrics, three miles, and all weights. There were five starters, Walter Baker, with a handsome stanhope, winning in 5:54%, W. M. Wright, in a Waverly, taking second.

The next event was the ten mile handicap for winners of previous events, and was won by Rollin H. White in 14:59½; Percy Owen second. Shanks was put out of the running by a bursting tire in the last mile.

Then followed the big race of the day, the ten mile open. The starters were Winton, in his "Bullet"; H. S. Harkness, in his Mercedes, and L. P. Moore, in a Peeriess. In warming up Winton circled the track at hairraising velocity, presenting a terrifying spectacle. The interest of the onlookers centred in the comparative moving of the "Bullet" and Mercedes. The race was thrilling, but only in the way that Winton cut it out. He lapped Moore in no time, pulled away from Harkness with appalling speed, and then set sail to catch him, which he finally accomplished, lapping him in the last mile and shooting past amidst tumultous cheering. It was a furious race, and one of the most spectacular events ever run in this country, covering man and machine with glory and establishinglishing a new world's track record of 10:50. The former record was 11:00, made by Winton at Detroit, October 24, 1901. In the second mile this time was 1:021/4. The former record was 1:062-5, made at Detroit by the same man.

The Australian pursuit race saw Winton and Harkness lined up once more. Again Winton cut loose, and even old racers held their breath as he shot round the turns in a cloud of dust. He caught and flew by Harkness, and like a whirlwind came tearing into the stretch, and the race was over. Moore, who also started, in this event, was not a factor.

## American Motor League Will Carry Owen Case to Higher Court.

After many postponements the case of W. II. Owen, who was arrested some time ago for alleged speed violation on the Merrick Road, running into Freeport, L. I., came up last Tuesday in that town before a large crowd of spectators, and resulted in a fine of \$35. Of the thirty-two motor vehicle drivers who have been haled before the Nassau County justices, this is the first where the dfendant has stood for a jury trial. The defense was undertaken by Isaac B. Potter, legal representative of the American Motor League. Attorney Graham appeared for the District Attorney, and the proceedings were before Justice Wallace.

In addition to casting doubt upon the crude timing system of Constable Miller and his assistants, the defence argued that the eight mile an hour law was never intended by the State legislators to apply to the outskirting villages or even to the villages themselves, since the limit in cities, towns and villages is left to the municipal authorities. According to the official timing, Owen was moving at the rate of twelve miles an hour. He averred that his machine was going within the restricted legal rate. Aware that the Freeport sleuths were gunning for speed violators on the Merrick Road, Owen used extra caution in entering the village, and he was much astonished when arrested.

The prosecution insisted that the only point for the jury to consider was as to the guilt of the defendant in driving an automobile at a faster rate than eight miles an hour, the unjustness of the law and the possible intent of its maker being question having nothing to do with the case in hand. The judge's charge was in a simlar vein. In less than half an hour the jury returned a verdict of guilty, wherupon a fine of \$35 was imposed.

Attorney Potter served notice that he would appeal, and the case will go to a higher court. Before the jury was sworn in an effort was made to show defects in the warrant and the complaint, but as Judge Wallace had drawn them up his declination to admit error apparently did not surprise the defendant's counsel. This material will be largely utilized in the appeal.

On Friday night, at its weekly session, the Board of Trustees of Freeport will consider a communication from the American Motor League, asking that a new speed limit be established for the village. The League has offered to supply signboards which will notify the autoist when he enters the village limits. It was part of the testimony of the defence that drivers had no means of knowing when they entered the village limits since the specially prepared quarter mue "arresting" stretch had but few houses

alongside, and they were on the finishing portion. President Dean, of the board, did not care to predict whether or not a liberal ordinance would be adopted Friday night. In the meantime autoists had better creep along like snails in Freeport.

#### Minneapolis has Races.

Minneapolis was introduced to the innovation of Automobile speed contests at the Minnehaha Driving Park, September 13, a crowd of 1,000 people turning out to view the sport. The weather was very propitious, there being no wind. Generally speaking, however, the contests were not exciting. The first race was at five miles, flying start, for Rambler machines only. M. E. Clark won, leading every mile; T. L. Wood second; time, 13:52½.

The second race was for 7 horse power and under gasolene machines, flying start, distance six miles. Ralph Bagley, in an Oldsmobile, finished in 16:37½.

The third race, a one mile, standing start, for Ramblers only, was one of the most interesting of the afternoon. There were seven entries. At the word a fair start was made, S. Andrews taking the lead at once, with C. Lacke a close second, Andrews finally winning by a long stretch; Lacke second. The time was 2:48¼. This race was one of the few in which every one finished.

In the fourth race, a ten mile dash, flying start, for 15 horse power machines, there were two entries, both Wintons, entered by Harry Wilcox and Frank Forman. The pace was evidently kept down by Forman in an effort not to outdistance Wilcox. As it was every mile was won by Forman, and the ten miles covered in 20:17.

#### Refuses to be a Scapegoat.

William K. Vanderbilt, jr., has left Newport, and said as he went that he would never come back except on short visits to his relatives. Mr. Vanderbilt has been annoyed for some time at the freatment he says he has received from the city officials in regard to his auto speeding.

Mr. Vanderbilt alleges that the treatment he has received has ben the means of driving him from the city. He says he has been persecuted by the police and has had to suffer for the sins of other. He had scarcely landed on his recent return from Europe when he was called to court to answer to a charge of fast driving. He denied the charge of fast driving. He denied the charge and said were it not that he was compelled to leave for New oYrk he would fight the case to the end. He feels that he has been unjustly treated by the police, who found it more spectacular to arrest him than a person not so well known.

#### A Recent Incorporation.

Anderson, Ind.—The Westfield Motor Co., with \$150,000 capital, to engage in general manufacturing. Incorporators, Albert H. Sears, Granville G. Westfield and W. C. Vanneman.





Published Every Thursday

By

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123-125 TRIBUNE BUILDING. 154 Nassau Street,

NEW YORK, N. Y. TELEPHONE, 2652 JOHN.

| London Office, 53 Pleet Street,<br>Paris Office, 2 Rue d'Abbeville, |         |        |
|---------------------------------------------------------------------|---------|--------|
| Subscription Per Annum (Postage                                     | <br>441 | \$2.00 |

Single Copies [Postage Paid] . . . 10 Cents Foreign Subscription

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Entered as second-class matter at the New York, N. Y. Post Office, Nevember, 1900.

NEW YORK, SEPTEMBER 18, 1902.

#### Motor Bicycles Not Included.

The failure of Class D-motocycles-to attract a single entry to the Automobile Club's reliability run, before it was discovered that by error they had been included in the rules, is scarcely surprising. In fact, as the balance of the rules were drawn with absolute disregard of motocycles, it appeared that the club anticipated the very lack of entries that exists.

The situation is not, therefore, one that calls for condolence. It simply serves to strengthen what we have long contendedthat the motor bicycle-tricycles and quadricycles are no longer made-is of and for bicyclists and the bicycle trade, not of or for the automobile industry. If anything, the line has been drawn more sharply, and

been made more distinct by the occurrences of recent months. Motor bicyclists have organized clubs of their own or thrown in their lot with already established cycling clubs, one of which during the last summer promoted and successfully conducted a "reliability run" of motor bicycles exclusively from Boston to New York; the League of American Wheelmen also has formally recognized the motor bicyclist and taken him under its wing, all of which goes to prove that the motor bicycle is generally considered more bicycle than automobile, and to indicate that automobile clubs, publications and other interests should recognize and admit the fact and govern themselves accordingly.

The motor bicycle is, after all, but the twentieth century development of the motorless bicycle, and so differs from four wheeled vehicles as to be apart from them and to require and admit of many special rights, privileges, regulations and observances that must forever be foreign to the large vehicles.

#### Some Ways of Testing.

In order to give one of his new models a thorough test before placing it on the market, a man who looks to be a manufacturer announced the other day to a representative of this paper that he proposed turning the vehicle over to two of his factory men, with instructions to run it from fifty miles to one hundred miles a day over all sorts of road and in every kind of weather that happens to be. If the test proved satisfactory, he went on to say, the new model would at once be turned out in numbers.

There can be no question that a trial such as this would go a long way to prove the reliability of tires and running gear, but it would furnish no data to prove whether or not the vehicle's gasolene motor would give satisfactory service in the hands of the average buyer not gifted with the skill of a man employed in the production of the vehicle and familiar with the peculiarities of this particular motor, as one must be who makes it or who is about it every working day.

A test to produce evidence on this point could better be managed by the average business man, and we believe that it would be a wise idea for this manufacturer to turn his vehicle over to such a person, after he has received instructions as to its management, and permit him to use it as though it were his own. He would discover, as one employed in the factory could not possibly do. whether the motor was suited to the use of laymen, and his success in its management would warrant the manufacturer in declaring that simplicity and ease of management were indeed features of his product.

It may be taken for granted that the user of this vehicle on its trial test would be compelled to depend largely upon his own resources, thereby emphasizing the better whatever shortcomings or advantages the vehicle may have, for the instructions that makers give to users are frequently not thorough and practical. They remind one of what would happen were the dean of a college to attempt to teach the primary department of a graded school. The little things that appear so simple are the very things that give the greater amount of trouble, and, if the maker thinks of them at all when he makes up his instruction sheet, he believes they are not worth noting. In consequence, the user has much to learn aside from the instruction sheets when he comes actually into possession.

If the manufacturer of gasolene carriages were to invite laymen into his factory, hand them his instruction sheet and then turn them loose in a vehicle, he would readily find that men of average intelligence would be unable to secure satisfactory service. And by observing their efforts, the maker would doubtless learn wherein his instructions fail, and then he would be in position to furnish instructions whereby any one could successfully operate the vehicle. The result would be that the maker could confidently and honestly advertise that "Any man of ordinary intelligence can operate our carriages."

#### Steam Clouds Dissipated.

Few will dispute that for some two years steam has been under a cloud of its own making. For a time, indeed, the future of the steam carriage appeared gloomy, and when discussed in the trade was generally accompanied by ominious head shakings.

In such discussions, it is fair to say, the blame was usually rightly placed. There is small room for dispute that steam's disfavor was directly attributable to the sins of omission and commission of the two manufacturers who were first to make use of it in a large way. Left to them, there is



no telling what would have hapuened. The doleful doubts conveyed by the head shakings might easily have been fulfilled.

Fortunately for the "world's standard of power," the newer entrants into the field of automobile manufacture brought with them fresher and better ideas and methods and materials of manufacture, and gradually they have been overcoming the lapses of the earlier laborers in the vineyard.

It is not possible to live down an evil reputation in a day, and the effect naturally has been slow of assertion. But it is now apparent to all whose eyes and ears are sound and true. Steam is no longer an "under dog." It has about lived down its period of disfavor. Its future is no longer discussed as if it were in question or hopeless, and the head shakes are now rare. Indeed, it is the admissions of former "head shakers" that "steam is regaining favor" that constitute the best evidence that such is the fact. The admissions are so numerous and spring from such sources that there is small reason for doubting them.

The situation is one that cannot but be viewed with satisfaction by the adherents of steam power. Some of them have suffered through no faults of their own, and the dissipation of the clouds caused by others will make easier their ways and go far to make richer rewards that are well deserved.

#### "Fight the Case."

That justice is doubly blindfolded when a motor vehicle is in the balance has long been so plain as to be notorious. The "equal and exact justice" of which prattlers prate is not now for automobilists, nor does it appear to be in sight.

Blame for existing conditions rests considerably on their shoulders. While some of those arrested made protest when arraigned, they take no stand and make no fight. Regardless of guilt or innocence, they pay any fine that may be imposed and go their way. To "fight a case" means an expense of time and money which the man of modest means cannot afford, and which the one of ample wealth will not contribute. It is easier to "give up."

How long this will continue cannot be foretold. Certainly the occurrences of the last week do not hold much hope of an immediate alteration of cenditions. Within this period two automobilists of practically unlimited wealth were arrested in different parts of the East for alleged violation of speed laws. Both denied the charge and

protested against their arrest, and, having protested, paid the fines inflicted.

While this procedure obtains there is small hope of relief. It is a form of legal blackmail that but for the temper of the sensational press would not be countenanced, but so long as men well able to "fight the case" submit to it, so long will the yokels and petty constables continue to consider automobilists fair game. A firm, unrelenting stand would frighten half of them out of their wits—if they have any—and it is only a firm, unrelenting stand that will put an end to the intolerable persecution to which users of motor vehicles are now subjected.

It requires but a few Moseses who will resolutely refuse to be "bled." They need but "fight their cases," carrying them "higher up," if need be, and the hayseeds and overambitions police will think twice before they act in the future. At present such Moseses have not come out of the wilderness, but it is hoped their coming will not be long postponed that the scales of Justice may assume a perfect balance.

#### Some South American Shortcomings.

Although the belief that South Africa offers a promising field for automobiles now that the war is over is a well founded one, it must not be supposed that they will encounter no unusual difficulties there. As a matter of fact, they will, and very great ones. The roads, where any worthy of the name exist, are very bad, and the remoteness of the country increases enormously the transportation difficulties encountered in getting vehicles, parts and supplies there.

In the first place it must be remembered that "South Africa" is a very comprehensive term, embracing conditions for the use of motor vehicles which vary enormously, and a vehicle which might be suitable in one place might not be the most satisfactory in another

Generally speaking, macadamized, or even "made" roads, are only to be found in the chief towns, and then seldom beyond the borough boundaries. As the towns are all rapidly extending, it often happens that many of the roads within the inhabited area are merely hardened tracks. These are very rough in parts, having out-cropping rocks, and holes at intervals, and being crossed occasionally by gutters and sluits.

During the rainy season these roads are very thick in mud, and in the dry season very dusty.

Across country between towns the roads are all of this description, but varying very

considerably. In places, long stretches of very fairly comfortable running are met with, alternating with very rough ground. There are practically no bridges, and the streams must all be crossed by fords, and no attempt has been made to facilitate the approaches to these crossings, consequently they are often very steep, stony, and very much cut up. In the wet season the veldt roads become mud tracks, and it is probable that rubber tyres would cause much trouble through skidding, while heavy vehicles frequently get bogged.

Vehicles which could not possibly cover 25 statute miles in a given hour, even on good roads, are popularly credited with being speed monstors, capable of eating up space at the rate of from 60 to 100 miles an hour. Consequently, whenever they are seen abroad, they are charged with reckless running. The most trivial incidents are magnified out of all proportion to their real importance, and this impression once made there is no shaking it.

Unreasonable and ill-founded as this state of the public mind is, it exists and must be reckoned with. Everything that will tend to allay the ill-feeling, therefore, should be done.

After the eye there is perhaps no organ in the human body which is so important to automobilists as the ear. The sound of an engine working properly is as music to the motorist, and the smallest unusual noise is at once detected by those who are possessed of the gift of a mechanical ear. A trained ear can detect the difference between the knocking made by a worn crank brass and a sticky exhaust valve, and will know at once by the sound of the exhaust whether the firing is taking place properly or the induction valve has become unlocked. In fact, the ear is the truest guide as to faults, great or small, in the working of the engine.

Another New York bicycle policeman has distinguished himself as a sprinter of the fast order. After chasing an alleged offender, whom he claimed was travelling at three times the rate allowed by law, for something like a mile, he caught up and arrested the offender. The speed of the bicycle policeman can best be appreciated when it is stated that he mounted his wheel after the vehicle had passed him, and during the chase ran his bicycle in a gutter to avoid running into a couple of pedestrians who had narrowly escaped from the automobile.





In calling attention to the peculiar ideas the residents of Pittsfield, Mass., had of the relative dangers of a "millionaire's" automobile and a Madden-manned President's carriage smashing trolley car last week. I am sure I did the worthy Pittsfielders no injustice. If I ever had an idea that perhaps I had been a bit too severe upon the Pittsfielders the worthy citizens of that Massachusetts town have themselves removed all possible chance for misjudging them by their own acts this week. On Monday the man whose reckless speeding of a trolley car killed one of the Presidential party, and more or less injured all members of the party, including the President himself, appeared before a Pittsfield judge, who, by the by, was the president of the trolley car company in whose employ the murdering Madden is. The car presidentjudge adjourned the case until January 1, by which time any punishment, if the unexnected happens and any is meted out to the trolley terror, will have lost all effect.

\* \* \*

An ounce of might is often more powerful in a motor than a pound of right,

\* \* \*

So much for one kind of scorching; now for the other. On the next day, before the same judge, was brought two ladies, who had been arrested charged with running a light runabout over the roads of Pittsfield, Mass., at a speed dangerous to the safety of all the good citizens of this very model town. What was the result? Was the absurdity of charging two women in a light runabout with being deadly scorchers recognized by the trolley president-judge? Was this case continued over until next January? Not much! You see, the alleged offenders in the case of the women were automobilists per se; that made them guilty as charged, no matter what the charge or by whom made; so the worthy trolley president-judge needed no time to investigate their case; he just fined them \$10 and called the next case! How difficult it is sometimes to recognize justice, especially trolley car justice of the Pittsfield judiciary make!

When we get what we want in a vehicle we are often disappointed to find that it is not what we wanted.

\* \* \* \*

Did you ever hear the speaker on the Fourth of July and upon other patriotic occasions hold forth in praise of the glorious fathers of the republic who died rather than submit to an injustice? Well, that kind of American is not fashionable any more, if we are to take Newport as the head centre of fashion in this country. Last week a multimillionaire, who has frequently been warned

against his reckless speeding of automobiles and once fined for disregarding the warnings, was arrested and charged with again driving his big racer at a speed not safe for any one. When his case was called the new type of American said he was being persecuted; he was unjustly singled out for arrest, and was not guilty, but despite all this he pleaded guilty, because he wanted to go to New York and did not care to be "bothered" with the case!

Now, what do you think of a man who will allow himself to be blackmailed, because if what he said was so that is virtually what was being done to him, and yet does not defend himself because it is too much trouble? Is it any wonder that automobilists are looked upon by sharpers as "easy marks," and by ordinary people as a selfish lot of un-Americans, who do not care what they do so the injury to others is reduced to a dollars and cents' basis, which they can pay and go on their way to repeat the offence when it pleases them? Someway I can't bring myself to believe that this kind of an American is of much value to the country or to anything he may favor with his patronage.

A man might learn many things about a motor if he didn't think he already knew them.

Over in New Jersey a judge has charged that if a horse, which is not upon the public highway at all, but is upon an adjacent lawn, gets frightened or ornery when an automobile is passing along the road, it shall be deemed that the automobile is responsible for any fool act that horse may do, and the owner of the automobile shall be held responsible for any damages resulting therefrom! What do you think of that for "Jersey justice," the purity of which has so long been famous? According to such a ruling, if the animal had been in the stable, and there concluded to do such damage as he might see fit, any automobilist passing along the road might be adjudged responsible for the animal's fool acts. I am pretty well used to the queer kind of stuff which is being handed out to automobilists labelled "justice," but really this latest Jersey package is far away the worst I have yet seen.

It is a poor rule that won't work both ways; but it is no uncommon thing to run across a rule in one's experience with motor vehicles which won't work either way.

\* \* \*

Those kindly souls whose pleasure—and I presume profit—it is to construct automobile yarns for sale to the daily papers have once more resurrected their famous Long Island motordrome, this time incorporating it and making it a nine-mile circuit. Of course, the public, which has been taught to believe anything the papers print about automobiles, has accepted this yarn as true, and is now being used as an argument for the confine-

ment of automobiles entirely to private road-

ways, built by, paid for and maintained by the millionaires, which, according to the sensational papers, all owners of automobiles

I wish the romancers of the press would show a bit more ingenuity when they set about cutting an automobile coat from the whole cloth. A circular, triangular or any other shaped course especially built for racing automobiles would have about the same chance for profit making and would be about as attractive as an ice making plant in Lapland. Those whose pleasure it is to see at what speed they can drive an automobile without injury to others or to themselves would about as soon think of going around and around a fenced in raceway as they would of sailing a yacht round and round the reservoir in Central Park. The mere speeding of an automobile, where the speeding is not attended with the spice of danger and the constant change of scene and place would be but one degree removed from a swift moving merry-go-round. The sooner these constructors, on paper and in papers, of these alleged racing tracks for automobilists allow themselves to be made aware of this the better it will be for all concerned. Even that portion of the public which is prepared to believe any and every thing about the automobile is entitled to some consideration, and the smallest amount of this would give the believers something more likely or more entertaining than this baldheaded, rag baby story of Long Island race-

I have noticed that fools may rush in with an automobile where angels fear to go, but they don't always succeed in rushing out again—that is, not without paying fines or damages, they don't.

\* \* \*

Once in a great while some one discovers a gold mine, and so becomes rich with a rush. Now and then a man in trade will stumble on to a good thing, and with nothing but luck he, too, will make a fortune in a short time. But the great mass of business men who attain success grow slowly, and so healthily. It has been said that the growth of character in a man and the growth of stability in a business are very much alike. The automobile business is a living exemplification of all this. In the beginning some stumbled into it, thinking it was a gold mine; a few of these stumblers yet remain, but they know now that it was no gold mine, and to-day they are only trying to get back some of the money they sunk before they discovered their mistake. Now comes thes lower growth, the gradual but absolutely certain elimination of these stumblers, which marks the passing of the speculative into the solid realm of actuality. There never was a trade which started with such a boom and which so quickly eliminated the boomers and became the solid industry that the building and selling of automobiles has. Even the most anti-automobile shrieker, to himself at least, admits

THE COMMENTATOR.



#### Less Than Two Cents a Mile.

During a 1,000 mile automobile trip the fuel bill of Dr. Robert Hessler, of Logansport, Ind., amounted to but \$8. For repairs he expended the sum of \$10.

Dr. Hessler kept a record of the run, a daily entry being made of the trips and the number of miles travelled, the amount of oil used, the cost of repairs and, in fact, any item that has any bearing on the subject. The greatest run on any one day was sixty-five miles.

To make the 1,000 miles required about 75 gallons of gasolene, at a cost of about \$8, and about 85 cents worth of lubricating oil. On good roads the machine ran at a cost of one-half a cent a mile for fuel; on a poor road it cost twice as much.

The repairs so far are directly ascribable to poor roads and streets. The worst or most expensive repair was a damaged wheel, which was warped or sprung while crossing one of the deep ditches which are allowed to exist in the city. Aside from the wheels, the repairs were trifling—replacing a bolt or two, plugging a punctured tire and replacing a weak part of the friction clutch—the latter at the expense of the firm making the machines. The doctor has had only one punctured tire. This occurred after making about 750 miles.

#### Public Line Pays Well.

The traffic of the Interstate Transit Co., the automobile transfer line operating on the Eads bridge between St. Louis and East St. Louis, continues to increase rapidly. The official figures for August show 14,283 passengers carried during the month. The average fare is figured at 7% cents, making the gross earnings more than \$11,500, which exceeds the preceding month's earnings by \$1,000 or more.

Other vehicles will be run in other directions in East St. Louis, practically paralleling the street railway tracks, and a system of transfers will be started. The inception of the auto service had its origin in disgust which seized a business man over the utterly inadequate streetcar service across the bridge, and he decided to introduce the horseless carriage, which has proved so successful.

#### Meteor Now Ready.

Having completed its organization, the Meteor Engineering Co. is now ready to begin operations at the old plant of the Steam Vehicle Co. of America, Reading, Pa. The company will manufacture the "Reading" steam carriage, and in addition will market a new model under the name "Meteor."

The following officers and directors have been elected: President, E. W. Alexander; vice-president, J. Milton Miller; secretary and manager sales department, E. S. Youse; treasurer, D. P. Schlott; general manager, I. D. Lengel; board of directors, E. W. Alexander, D. P. Schlott, E. S. Youse, W. T. Hain, O. S. Geiger, M. D. Hunter and J. Milton Miller.

#### To Stop Speeding in South Jersey.

Beginning September 20 an ordinance that will, if enforced, put a stop to speeding on the road from Camden to Atlantic City, N. J., become operative. The ordinance, which was passed by the Atlantic County Board of Freeholders, fixes the maximum rate of speed at ten miles an hour, and for the violation of this ordinance a fine of \$25 will be imposed.

It is also stipulated in the ordinance that should teams become frightened the automobiles will come to a full stop until the team passes.

#### Got There in an Automobile.

Battalion Chief Boon, of the Rochester, N. Y., fire department, is hoping that an automobile will be installed for his use. An accident that happened last week inspires the wish. The chief started out to answer an alarm in his wagon, but on Main street he collided with a trolley car and the shaft of his wagon was broken. While the chief was disentangling himself from the wreckage an automobile appeared and the owner invited Boon to get aboard. Then the car was speeded to the scene of the fire.

#### Saved a Patient's Life.

Called to an important consultation in a town thirty miles from Indianapolis too late to catch the last train, a physician of that city, after canvassing the situation pretty thoroughly, thought of A. C. Newby and his long distance National electric vehicle, Calling the factory by telephone, the physician was fortunate in finding Mr. Newby in his office, and without preparation the journey was commenced. The doctor was taken to the objective point in less than two hours, and assisted in saving the patient's life. The doctor has naturally become a strong advocate of the importance and utility of motor vehicles.

#### Recent Treasury Ruling.

Out of the Treasury Department's recent ruling permitting the reimportation of automobiles has arisen an attempt to apply the rule to merchandise.

"This was not the intention," says Secretary Shaw. "The object of the ruling is to relieve tourists from the second payment of duty on wearing apparel, articles of personal adornment and other personal and household effects appropriate to their journey. It must not be extended to merchandise."

The decision referred to was made by the Treasury Department a few weeks ago. It supplemented a previous ruling giving importers of foreign automobiles the privilege of depositing the amount of the duty on their cars and having it refunded if the vehicle was taken out of the country again. Under the ruling under discussion, the owner of a vehicle who took it abroad could, upon presenting proof of the fact, bring it back without subjecting it to the payment of duty.

#### Test Case Dismissed.

The criminal case against Gerald May, tried last week at Southampton, L. I., for violation of the speed limit of automobiles, under Section 666 of the Penal Code, was tried before Justice Foster, sitting as judge of Special Sessions. District Attorney Smith, of Suffolk County, conducted the prosecution, and at the close of the plaintiff's case the complaint was dismissed.

Special Constables R. P. Kampf and F. H. Call said that by their stop watches Mr. May had gone one-sixteenth of a mile in fifteen seconds. The legal limit is twenty-eight seconds, or eight miles an hour.

Colonel Franklin Bartlett, counsel for Mr. May, asserted that the case was unconstitutional; that unfair discrimination was shown and that the whole proceeding was unjust because it takes away existing civil rights, and that the State had falled to make out a case because it had not shown the incorporation of the village. The court held that the last point was fatal to the prosecution.

#### Built of Dyke's Parts,

In completing a round trip from Centralia, Ill., to St. Louis and back, a total distance of 165 miles, Dr. C. L. Morey and N. T. Cunningham, of the former city, report that there was not an accident or anything to mar the pleasure of the trip, except on the return they were caught in a heavy rain and drenched to the skin. They left Centralia on Tuesday morning and arrived in St. Louis that afternoon. They spent Wednesday as guests of A. L. Dyke, and left St. Louis at noon on Thursday, arriving in Centralia that evening.

The roads were very rough and hilly, but the gentlemen report that they had no trouble whatever in taking the hills and rough roads. The vehicle in which they made the trip was built by them, having purchased the parts of Dyke's No. 1 outfit. They state that it was quite a pleasure to make a trip in a vehicle of their own construction, and the fact that they thoroughly understood their machine was worth quite a good deal.

#### Opponents of Speed Arrested

Manchester-by-the-Sea is a famous summer home resort on the north shore of Massachusetts. Catching the fever of the "half-mile stretch timing" scheme for arresting alleged speed violators, the chief of police of that place on one day last week arrested the son of Henry C. Frick, the former business partner of Andrew Carnegie, and two sons of Henry Clay Pierce, the St. Louis Standard Oil man and chairman of the directors of the Mexican Central Railroad. This made three vehicles in the roundup.

The oddest thing of all about the arrests is that Mr. Frick and Mr. Pierce both belong to the North Shore Automobile Club. This club was started with the avowed purpose of opposing excessive speeding of automobiles, and the club has held "runs" in which the autos paraded through the North Shore towns in a very discreet and dignified manner.





Frank A. Munsey has purchased a 12 H. P. Panhard car.

S. A. Miller, of Allyn street, Hartford, Conn., has taken the local agency for the Prescott steam vehicle.

Henri. Fournier is expected to return to this country early in October. He will bring several cars with him and will probably do some racing.

The Peerless Mfg. Co., of Cleveland, Ohio, are considering the proposition of removing their plant either to Lorain, Ohio, or Syracuse, N. Y.

The new Winton vehicle used by C. B. Shanks in the Cleveland races, and called the "Pup," is reported to be a counterpart of the Bullet in everything except size.

The English War Office competition for tractors for military purposes, which was announced for the spring of 1903, has been postponed until the fall of the year, probably some time in October.

Director A. H. Leslie, of the Pittsburgh, Pa., Department of Public Safety, will have an ordinance presented in councils requiring that operators of automobiles be licensed, after passing a suitable examination.

Austin & Son, of Grand Rapids, Mich., have recently purchased a large building at No. 88 South Division street for the purpose of manufacturing automobiles. The firm is now making some of the parts.

It has been decided by the Fournier-Searchmont Automobile to retain offices in Philadelphia, notwithstanding their removal to Trainer, Penn. They are now installed in Rooms 503 to 507, North American Building, Philadelphia.

A pneumatic tired carriage is said to have been built in London in 1845, and a set of solid rubber tires made to order in England as long ago as 1871 is still in existence. They were something of a luxury in those days, for the makers received \$1,200 for the set.

In addition to the automobile show to be held at the Crystal Palace, London, in January next, Charles Cordingley has announced that his eighth annual exhibition will take place March 21 to 28, 1903, at Agricultural Hall, London.

W. A. Richwine, for many years identified

with the cycle track, and the one time inventor of a pneumatic tire, has returned from an extended absence abroad, and is now assistant to William Morgan, secretary and sales manager of the Autocar Co., of Ardmore, Pa.

By the average railroad man, such records as have been made by the automobile—the kilometre in 262-5 seconds, or the mile in 483-5—without the aid of good, heavy rails and a well ballasted roadbed, are regarded as being about as safe as smoking on an open barrel of gunpowder.

Referring to nominal horsepower, a keen observer divides automobile manufacturers into two classes, namely, those who give their motors a nominal horse-power which is greatly exceeded by the actual brake horse-power, and, secondly, those who call their motor of a horse-power which it cannot really develop.

Plans are being outlined in Grand Rapids, Mich., for the organization of a company to manufacture gasolene vehicles. It will have a capital of \$500,000. The principal men concerned in the project are Charles M. Matheson, secretary of the Fred Macey Co., Ltd.; Louis C. Howard, a dealer, and Clark Sintz, manufacturer of engines.

If the King of England is above the law even when it comes to the "furious driving" of motor cars, his Prime Minister is not. Recently an automobile driver in the employ of Prime Minister Balfour, who should have appeared before the magistrates of St. Neots, for furious driving, failed to put in an appearance, and a fresh summons for the man was issued.

The Great Western Cycle Company, of Minneapolis, Minn., agents for the Rambler automobiles, are building one of the finest automobile repositories and liveries in the Northwest. The new building, 60x80 feet in dimensions and two stories in height, with a fine basement, will be ready for occupancy October 15. It will be fitted with all modern conveniences.

The continued importations of high grade motor vehicles at this port is a surprise to customs officials, who until recently supposed the demand for the foreign made machines was a fad and would soon die.

About a dozen foreign vehicles were on the floor of the Public Stores utlergoing examinations last Friday, their values varying from \$5,000 to \$12,000.

Last week Philadelphia's postmaster started a new system of mail communication between the postoffice and the Broad street railroad station by using an automobile to carry the third and fourth class mail matter, which heretofore has been sent through pneumatic tubes. If the innovation proves successful it is the intention of the

department to purchase several similar wagons.

The local committee of arrangements for the Grand Army encampment, to be held in Washington, D. C., has received, in reply to its application for permission to have an automobile race during the celebration, a note from the District Commissioners disapproving the proposition on the ground that "the danger to life and limb would be too great to warrant the Commissioners in permitting automobile races on any street or avenue of the city.

#### England's Reliability Contest.

Particulars of the beginning of the 650 mile reliability contest of the Automobile Club of Great Britain recently received show that the American cars that competed scored honors of the highest order. It rained on the first and third days of the trials, so that travelling was anything but pleasant. There were comparatively few machines among the fifty-nine starters that failed to finish. Classification according to price and with no reference to weight was the plan followed.

The vehicles were rated in value from \$750 up to \$6,000, the first division being for the smallest machines and including motor bicycles and tricycles. There were 300 points for each day's run, and every stop or repair of any kind, as reported by the observer, took a certain number of points from the perfect score. To show the manner of enforcing rules, it might be stated that a number of cars which were ten minutes late in arriving at Crystal Palace, the starting point, were barred from competing.

The brake tests proved the immense reserve the automobiles possess. The cars qualified to run in the trials were submitted to an uphill and downhill trial of their brakes on a 1 in 7½ grade, in the Crystal Palace grounds. The cars were first tested on the descending grade, employing first both brakes, then foot pedal brake and side brakes separately, to show whether or not they would hold the cars stationary on that grade.

The cars were driven slowly on to the pitch and both brakes applied upon a signal from the judge. Then the power of first the foot brake and then the side brake was tested, with the clutch out, to ascertain whether each would independently retain the car on the grade. The all around excellence of the brakes was noticeable; in the majority of cases the foot brakes proved the more powerful.

In the holding backward trials with both brakes there were practically no failures. The instances in which the side brakes failed to hold on the downhill test, while the foot brakes held, should not cause it to be presumed that the side brakes were inefficient. With the majority, the failure was due to oil on the drums. It must also be borne in mind that the brakes are written down as not holding if the car showed the slightest suspicion of moving, so that failure marked here does not presume the brake unsafe or unreliable for general all around use.



#### **UNDER RACING STRAIN**

#### Views of one who Owns Horses and Automobiles—Values of "Crossing."

Than Dave H. Martin, of the Automobile Club of America, few men are more conversant with the questions which affect racing. Both as a horseman and as an automobilist Mr. Morris is exceptionally well qualified to speak. In a recent interview he thus delivered himself:

"Racing is a very important adjunct of automobiling, for it gives to the manufacturer positive proof of the good and bad points of his product, and ultimately brings to the public safer and stronger machines.

"I am strongly in favor of racing over courses that are adapted for fast travelling with power driven machines, for there is nothing like a speed test to bring out defects in the human body or in a piece of machinery. It is seldom that this same result can be secured by an endurance run where the speed is limited to twelve or fifteen miles an hour. I believe that the present almost perfect state of the French machines can be attributed to the fact that they have been developed under the strain of racing.

"Nevertheless, I am free to admit that racing under improper conditions is a detriment to the machines, to the operators and to the sport itself. Sooner or later we shall have to have a concourse where automobiles can be driven at speed without danger to onlookers. Under perfect conditions, which would mean over a smooth and level straightaway course, I believe that within a few years the mile record for power driven machines will be 36 seconds, or at the rate of 100 miles an hour.

"My idea of a machine that could travel at this speed is one built on the cigar shape principle," continued Mr. Morris. "It must be fitted with a wind paring device. It may have either wood or wire wheels, shod with pneumatic tires. The operator must be inside of the body, and the elimination of wind resisting surfaces will be one of the main features. I confidently expect that steam, gasolene and electricity can be perfected and applied to machines which will supply this speed. Or it may be some new power yet undeveloped.

"It is generally agreed that the type of machine which is good for racing is not good for general use. The same thing applies to horses, for the breed used in racing is hardly good for general use, yet it is necessary to have the racing type developed in the horse and in the machine in order to bring the ordinary product to a higher state.

"In the breeding of useful horses a thoroughbred is crossed with a mare of cold blood, and the offspring is a higher breed than the mother. Continued in practice this brings an improvement in the breed. It is almost the same with automobiles. The fine parts of racing machines that have stood the

test of high speed and its consequent strains are incorporated in the regular touring car. Speed, lightness and durability are the main points in both. It is worth noting that every manufacturer who has tested his product by speeding on the tracks and roads is offering to the public a car of the reliable kind."

#### Influence of the Rubber Tire.

"The strapping of an elastic substance around the rim of a vehicle wheel was a step which the originator of that idea could not comprehend in its ultimate outcome," says the Carriage Monthly. "It has revolutionized the vehicle industry in a certain sense and to a certain degree. The rubber tire is not yet a decade old, as to general acceptance, although manufactured for over thirty years. Its introduction was not an experiment, but an accident, as it were-one of those fortunate accidents, one of those inspirations which come without invitation. The rubber tire has worked out a field of its own. It has eliminated jolting, grinding and tearing, and has given to the use of vehicles a degree of enjoyment which never before was dreamed of. For quite a while after their introduction they were regarded as novelties, as something to be guarded against; as good in theory, but not good in practice. Those who advocated their use in vehicles were regarded with suspicion by many. Even those who saw their utility proceeded very cautiously in their adaptation.

#### Overdid the Speed Estimate.

They are telling a good story on a Boston mounted policeman which illustrates how wild some of the statements made relative to automobile speed really are.

He arrested an automobilist for "scorching," and in court testified that his prisoner had been travelling at the rate of 15 miles an hour between two streets on Commonwealth avenue. Believing, evidently, that the autoist would fracture the law, the policeman, in order not to interfere with his sport, watched him start from one of the points referred to, then, putting spurs to his horse, rode on the side street to the street parallel with Commonwealth avenue, along it for two blocks, and down that side street to the avenue again, all in time to intercept his victim. The latter suggested that if he was travelling at the rate of 15 miles an hour the law preserver must have been going almost 30, as he had traversed three sides of a square while the alleged culprit went one. The judge saw the point and discharged the prisoner.

#### Self-Protection Society.

Articles of incorporation of the Long Island Highway Protective Society of Oyster Bay, Nassau County, were filed with the Secretary of State at Albany last week. It proposes to protect the interests of the people to the public highways of Long Island, to support and co-operate with the authorities in the enforcement of the laws governing the operation of motor vehicles, and riding and driving upon the highways, and to promote legislation against the dangerous or reckless use of motor vehicles on public highways.

#### **ADVISES CARRIAGE MAKERS**

## Methods Pointed out for Entering the Motor Vehicle Industry.

"Since one of the largest carriage manufacturers has this season entered the automobile field, and is now offering to the market high grade electric machines of different patterns, it may be well to describe what is necessary for the carriage manufacturer to equip himself for the manufacture of such vehicles," says a writer in the Carriage Monthly.

"Recently a small carriage manufacturer came to see me, and said that he desired to enter the automobile business, but did not care to spend any money for the experiment, nor did ne care to add expensive machinery to his present equipment. I assured him that such was not necessary, that all the apparatus and running gear could be bought ready to assemble, and then fit body to it and finish the job. I told him of a manufacturer of his capacity who had recently done the same, and all the equipment he had was that of a carriage concern employing twenty men. Everything was bought, and I had selected proper apparatus, furnished design and drawings, and showed the blacksmith how to assemble. The vehicle works admirably, and can be made so that an excellent margin is left. This has been repeated by several carriage concerns since.

"The procedure in the case of this large manufacturer who is offering automobiles for sale this year is a trifle different. The gear is a four spring arrangement, with revolving rear axle. Above the springs is a tubular grid, to which is attached in front the brake lever, in the middle the motor, geared by a chain to rear axle, and in the rear is built a platform, on which are set the batteries. Almost any type of body can be clipped to this, and the parts come in such shape that no mistake can be made in assembling.

"The selection of such parts, however, requires experience, so that the resultant combination is the best and most efficient. An engineer should be used in the beginning, at least, to guide in the selection and furnish a design of merit and one giving individuality in each case.

"As to the merit and economy of such procedure, much can be said. All uncertainty of experiment is done away with, for each part can be purchased from a concern whose engineers have had abundant experience and whose shop equipment is such as to bring about accurate and efficient apparatus. A volume of business, perfect shop equipment and experience in manufacture, will allow a sale price to the carriage manufacturer, so that he can purchase these cheaper than he can make them himself, besides eliminating a large working capital necessary to equiphimself for the manufacture of details.

"The building of automobiles from stand-



ard parts, purchased in shape to be used without alterations, is both ideal and practical for the carriage manufacturer, but unless the selection of such parts is guided by experience, the attempt will be an expensive experiment. In each case, however, several test samples should be built, so that the manufacturer can satisfy himself that the selection by the engineer has been proper. A sample, of course, will cost more than when vehicles are built in quantity, but a successful sample can be made for what the retail price of such vehicles would ordinarily be.

"With the introduction of the automobile, promoters and inventors were busy, one seeking out the other, and with combined efforts interesting capital in an apparent rosy proposition, which, in most cases, was to the sorrow of the latter. In this way several hundred companies were formed, which experimented with one or two companies and then dissolved. The patent always presents a proposition to the promoter for making money by water. Now, however, this has been sifted down to a 'survival of the fittest,' and those who manufacture complete automobiles or parts have something legitimate to offer, and an article with merits furnished by experience.",

#### Results of a Little Attention.

"Automobiles are quite generally termed an expensive toy, while in reality such is not the case. Any machine for any purpose whatever must have some attention in order to properly perform its functions, and the automobile is no exception. But with that little attention which is needed, it is surprising what the machine will do," remarked an automobilist recently.

"Take my carriage, for instance. With 200 pounds of steam in one gauge, which is the ordinary running pressure, I have climbed to the top of West Side Hill and had 160 pounds of steam when we got there, then, turning around and running to the bottom of the hill, backed up to the top again, to the amazement of the bystanders. And this on the worst hill in the vicinity, and in bad shape, too, on account of the recent heavy rains.

"I have run the machine on streets where a horse could not go, the centre of the road having been washed into deep gullies by the rain, but we rode our wheels on the ledge either side. The element of safety is well taken care of also, especially as regards the bodies, which are all tested under 750 pounds cold water pressure, which is much more severe than steam, while, as I have told you, we run under only 200 pounds of steam, and our safety valve opens at 230 pounds.

"They are practical even for the busy man. With the engine cold we can light our fires, get up steam and be on the road in ten minutes, which is less than you can get out a horse and harness him ready for driving.

"If a man buys a good horse, carriage and equipment for \$500 and pays \$25 per month for board for the horse, at the end of fourteen months he has invested \$850 and the

expense is still going on, while the same amount invested in an automobile will bring him no more expense except his gasolene for fuel, which costs about 1½ cents per mile. Against possible minor repairs to the machine, we will put the possible sickness or injury to the animal, and there you are.

"Of course, any man may, if he choose, wreck a thousand dollar machine in one one-hundredth as many minutes, but he won't if he uses a certain amount of care and common sense. Yes, common sense is an important adjunct in running automobiles."

#### Value of Style.

"Styles are an important factor in carriage building, quite as much as with automobiles. Old-time carriage builders made their changes with each carriage as it was ordered in light and medium work. In heavy work, from broughams to coaches, the changes were made in the spring to have them ready for the fall sales. This is still

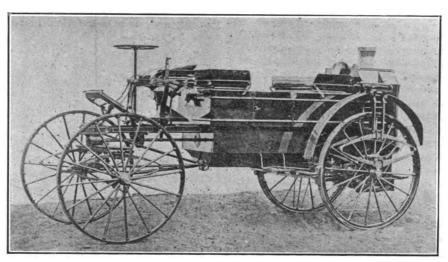
#### TWENTY-SIX YEARS AGO

Built in a Locomotive Works—Shown at the Centennial—An Emperor's Query.

An automobile that was really a practicable vehicle in every sense of the word was designed, built and exhibited in this country twenty-six years ago. Although it was seen by hundred of thousands of people, having been shown at the Centennial Exposition in Philadelphia, it has been almost completely forgotten.

The vehicle was designed by L. T. Pyott and was owned jointly by Mr. Pyott, F. A. Morse and William Devine. They were all at that time foremen connected with the Baldwin Locomotive Works, in Philadelphia.

The carriage was of handsome design and finish, costing some \$2.200, not including Mr. Pyott's personal attention. It was canable



EXHIBITED AT THE CENTENNIAL EXPOSITION.

the rule at present," says the Carriage Monthly.

"The matter of style is an important consideration always. Style sells more work than merit, but merit and style go together. That is to say, style is the first to attract; style pleases the eye, merit the judgment. Style ecan cover defects, but merit, though modest, cannot hide itself from the cultivated eye of the skillful carriage builder and buyer. Style is to-day a more important factor than ever, because genuine merit is more abundant in fine carriage work than before the days when mechanical appliances made superior work easier and cheaper."

#### For the Duchess of Marlborough.

Last week the Electric Vehicle Co., of Hartford, Conn., shipped to England an electric victoria, purchased through the company's Newport agency by the Duchess of Marlborough, who, before her marriage, was Miss Consuelo Vanderbilt, of New York. The vehicle is of the regular Columbia victoria type, and will be operated in person by the duchess in running it over the roads in the vicinity of Blenheim Palace, the famous seat of the Dukes of Marlborough.

of carrying seven persons, at the rate of twenty miles per hour.

The weight of the carriage was about 3,900 pounds, including weight of battery. It was provided with rubber tires on the rear or driving wheels. These were made in sections or segments. They proved worthless, as they were not of proper fabric to stand the severe work.

The machine did good service on the worst form of tires. The wheels were 52 inch drivers, boiler 48 inches in height, 24 inches diameter, 20 inch fire box, eighty-five 11-4 inch tubes. Tank capacity fifty gallons. Engine cylinders were double of 5 inch bore, 8 inch stroke, geared to drivers in the ratio of 16 to 39. Anthracite coal was used as fuel. The operation of the machine was thoroughly under control from the front.

The steering device was of peculiar construction, the front axle being held in position by radial arms centring 48 inches from arm of dials. Seated on top of front springs was a radial racket, on which rolled a flanged gear, which caused the main frame to traverue from right to left, thus each axle



assumed a radial line to the curve being made and the wheels tracked in line.

The rolling gear, on the radial rack, served a double purpose, as it gave a thorough equalizing pivot to adapt the running gear to all irregularities of the road.

The rear, or driving wheels, each of which carried about one-third of the weight, were provided with double springs with yoke passing over the same to form the outer support.

Just previous to the Centennial Exhibition the carriage was completed on the premises of the Baldwin Locomotive Works. Dom Pedro, then Emperor of Brazil, visited this country. The large manufacturing concerns of Philadelphia were of particular interest to him. While going through the works his attention was called to this carriage. He made a thorough examination into all points of construction and, strange to say, one of the questions was to the effect, why could not this be driven by electricity?

#### Uses Gasolene to Start.

Alcohol used as a motor fuel causes trouble by the more or less oxidized products it leaves behind it in the cylinder. These act injuriously upon pistons and cylinders.

A German firm has very ingeniously disposed of the difficulty by starting the engines and finishing up with gasolene. So soon as the motor has waxed hot by the combustion of a few gasolene charges, and a certain speed has been attained, the governor automatically turns off the gasolene and turns on the alcohol. Conversely, when the motor is brought to rest, the governor, on the lower speed being reached, cuts off the alcohol and again turns on the gasolene.

The result of this action is that the last few explosions taken by the motor before coming to rest are produced entirely by gasolene, which has the effect of clearing out the products of the alcohol combustion, and so preventing their injurious effects upon cylinders and pistons. An additional advantage obtained by this arrangement is that the gasolene feed to the motor is ready for immediate restarting at any time, and that no difficulty is therefore likely to be experienced during this operation.

#### Fournier Gives His Views.

Henry Fournier in a letter written to a New York paper in the matter of the Fair accident, says in conclusion:

"A good many people say that Mr. Fair did not put on the brakes. I am convinced that this is not so, for I noticed in the grass the trail of a dragging wheel, which could not have been made by any but a wheel that was blocked.

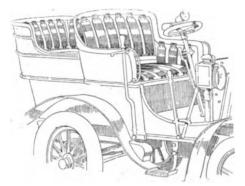
"Others say that the transversal bar which joins the front wheels had come apart on one side and that the bolt had disappeared. I am absolutely certain of the contrary, because the proprietor of the chateau in front of which the accident happened said to me: We were unable to move the car, as the managing gear was strained, and we were obliged to withdraw the bolt. It is in the tool box of the car, as you can see for yourself. I screwed the nut on again myself."

#### Pyrotechnic Motor Car Race.

One of the items in the display of fireworks devised for the amusement of the Shah at the Crystal Palace, London, consisted of a pyrotechnic motor car race. There were two competitors, and they ran, figures of fire, along the dark background. One motor car stopped, the other gayly sped along, and its chauffeur turned round mockingly. The driver whose machine would not go got out, ran around it all alight, turned screws of light with his fingers of light, sprayed oil on beams of light, hammered with a hammer of light, got into his seat again as brilliant as ever—and then blew up magnificently.

#### Adds to the Comfort.

Anything that makes a motor car more comfortable than it would otherwise be is welcomed quite as a matter of course. Change in body design of late has been all in this direction, and wonderful strides have been made. An English concern is making a specialty of the spring seats illustrated, and they are said to be luxurious to a degree.



They are so designed that they do not admit of too much movement and all small road shocks and vibrations are entirely absorbed. The ordinary spiral form of spring is not the most suitable for automobile purposes, as it loses its shape. The spring seats shown are decidedly better adapted. They are very easily fitted to the framework of any motor car body, and still admit of the stuffing with horsehair and upholstering in leather in the usual way, while their peculiar form renders to the occupants the most delightful ease without any of the sense of being too much on springs.

#### Always Climbing Higher.

"Automobile makers have had to display so much ingenuity in increasing the powers of their motors within the weight allotted for the vehicle that it seems hardly possible to improve upon the 70 and 80 h. p. engines which are at present fitted to the big racing cars," says a foreign correspondent.

"And yet we hear of three or four firms who intend next year to eclipse everything they have yet done. Gobron-Brillié have been encouraged by their recent successes to go in for the construction of big vehicles, and are credited with designing an engine of no less than 120 h. p., while Mors and Peugeot are thinking of putting motors of 100

h. p. into their next year's cars. De Dietrich will also make a great bid for racing honors with their Turcat-Méry system of vehicle.

"If they succeed in augmenting power in this way, can we look for any considerable increase in speed? It is difficult, even over well known courses, to imagine that they can be driven at much more than a mile a minute, as was done by Baron Pierre de Crawhez in the Ardennes Circuit, or seventy-six miles an hour over a kilometre on a record course. Speed has evidently physical limitations, and it is doubtful whether a driver will care to utilize the full power of these formidable machines over ordinary roads.

"Whatever may be done by the vehicles in the way of speed, this striving after higher powers must continue to have excellent results for the industry, and the French makers have carried out so many remarkable improvements that there is no telling what their ingenuity will do in the future."

#### As Maeterlinck Views It.

"Can one conceive of anything more exhibitaring than the impetuous progress of a motor car?" asks M. Maeterlinck, the distinguished dramatist. "Personally, I know of no form of motion so inspiring as that of a well built car along a well made highway. Think of the numbers of ordinary methods of travelling, and tell me if there is a single one which can equal this. For instance, however quick your steamship may be, one can never taste the pleasures of rapid motion on the sea. The ocean is so vast that the vessel seems to make hardly any progress at all.

"No, there is naught to equal the motor car. It brings us into closer relationship with trees, and flowers, and streams than we have ever been before; it enables us to see more beautiful landscapes in a week than men formerly saw in a whole lifetime; and passing before the open doors of village houses, and laborers working in the fields, it gives us a peep at human life in all its most pleasant aspects."

#### Another big Track Rumor.

William S. Devery, once New York's chief of police and always a politician, is reported as planning a two or three mile track on some land he owns down in Jersey and now lying idle. According to the interview, Mr. Devery thinks "there wouldn't have to be any grandstand or bleachers. The only expense would be in levelling off the land and building a fence around the property. People that came to watch the races would come in automobiles and drive right up alongside the track to get a good view of the contestants.

"I think such people as Keene and Vanderbilt, and them fellers, would patronize a thing like that. The authorities won't let them speed their White Ghosts and Red Devils on the highways. With my track to use they'd be making match races for ten thousand a side. The idea is bound to make good. It'd be like taking candy from the baby."



#### **TESTING BATTERIES**

## Some Voltmeters Give Wrong Reading Because They Take out no Current.

As motorists are aware, one difficulty met with in connection with ignition batteries is that when the battery is tested on what is called open circuit, that is to say, before there has been any current taken out of it after a period of rest, the voltage indicated on the ordinary pattern voltmeters is not to be relied upon, being, in the case of a battery which is nearly run down, nearly 25 per cent higher than that available for working purposes. The reason for this is that there is no current taken out of the battery when measuring with the ordinary pattern voltmeter.

An English concern has just introduced a new voltmeter designed to measure the pressure, and at the same time to cause the battery to discharge the normal amount of current which is taken from it under ordinary working conditions, no fictitious voltage being, therefore, measured, but only that actually available for continued duty. Another advantage of the apparatus is that the needle has absolutely no swinging motion, and cannot, therefore, become damaged, no matter how it is handled.

The principle adopted is that of the "hot wire," in which a wire, which, traversed by a current, is heated by its passage and expands, moving the needle over a definite angle corresponding with the current passing. The voltmeter is very compact and strongly made, and is constructed to indicate up to 2.2 and 4.4 volts, which is the limit of pressure of the ordinary batteries now in use. At the back there are two small prongs, which serve to make connection to the terminals of the battery, the voltage of which is to be ascertained.

#### Leads to Awful Mendacity.

There is a Buffalo physician who does not like autos. This may be because he hasn't one. However, he maintains that the auto has a morally degenerating effect upon physicians.

"An auto makes a liar out of the doctor who owns one," said he with proper emphasis. "Every physician whom I know who has an auto says they are the greatest things on earth and that they never have any trouble with them. I saw one of them the other day who had been extolling the virtues of horselessness to me. I saw him on a road near the city line, and he was lying on his back in the dust under his machine, pulling and hauling with a wrench on some parts of the inwards of the thing and cussing pretty well for a man of his standing. I had my horse, and I must say I took a certain satisfaction in observing the mechanical ingenuity

the doctor had developed. He didn't see me, and I heartlessly drove on.

"I saw him that night and asked him if his snorting machine still moved along pleasantly, and without interruption or appendicitis or something, and he eyed me calmly and said he had never had the slightest trouble with it and advised me again to get one."

#### Rapidly Approaching Readiness.

Although purchased only last week—at a cost, it is stated, of \$90,000—the new home of the Fournier-Searchmont Automobile Co., at Trainer, Pa., is already being prepared for occupancy. The cotton mill machinery is being taken out, and plans have been made for the alterations and additions to the buildings which are rendered necessary by the change of base.

It is the intention of the company to enlarge the office by making it 100 feet longer and turning it into the draughting room for the engineering department of the works. Across the street on the south side, at No. 2 mill building, the present machine shop will be torn down, and in its place will be erected a new machine shop, which will be 150 feet wide, over 300 feet long and two stories high. This, with the other rooms in the buildings, will give a floor space in the entire plant of 265,000 square feet.

The new plant will be put into operation at the earliest possible date, and when the shops are running with the full force there will be between 600 and 700 men employed. Nearly every man will be of the highest class of skilled labor. The wages will be correspondingly high, making the average on the payroll, including the help of every kind, \$14 a week

No. 2 mill will be the machine shop, while No. 1 mill will be the woodworking shop, where the bodies of the carriages will be made, the polishing and work of a similar character done.

#### An Automobile in a Trunk.

Taking advantage of the great popularity of the automobile more than one theatrical manager or actor is arranging to make use of it in the season's attractions. Among these is Harry Gilfoil, the comedian and mimic, the star of Klaw & Erlanger's "The Liberty Bells." He will play the part he impersonated last season—Uncle Jasper Pennyfeather, an eccentric inventor. To add realism to his character Gilfoil has spent his summer inventing several very humorous mechanical contrivances, which will strengthen very substantially the already splendidly developed comic side of the piece.

In the second act, in the cooking school scene, Mr. Gilfoil will present the most unique "prop" ever seen on the stage. When brought on it is apparently a plain traveller's trunk, covered with many posters of railroads and hotels. Uncle Jasper is a woman hater. Hearing the approach of a bunch of school girls the misogynist declares he will "take his trunk and go." This trunk is immediately converted into an automobile, and Uncle Jasper rides off the stage,

#### **WOODEN WHEEL TYPES**

## How the Artillery and the Craskill Differ in Construction at the Hub.

"There are two types of wood wheels in use for automobiles, one the artillery and the other the Craskill, though both are generally confused in the former title," remarks a British writer.

"The difference is simple. In the artillery wheel proper each spoke is formed into a long tapering or wedge shape end. These. fitting closely together, form the hub of the wheel (that portion as usually understood being absent). Two stout side plates are secured by bolts, one each side, or in the form usually adopted by modern builders; the inner plate is in one with the box of the wheel, the outer plate thus taking the form of a large washer, and the bolts passing through the spokes, binding the whole strongly together. It will be seen that in this form of wheel there is really no hub at all, but great lateral strength is given by the bolts before mentioned, and it is comparatively easy to replace a damaged spoke.

"In the Craskill wheel the hub is of cast iron, with pockets into which the spokes are driven tightly and the outer ends turned for the felloes by a special machine to one gauge. This wheel is cheaper to make, but will not stand the stresses of the 'wedge' spoked wheel, and is more troublesome to repair.

"Then there are artillery wheels in which dishing alone is used, and others in which the spoke is also sprayed, and in the Craskill type this is an undoubted advantage."

#### Nine Miles Around.

Scarcely less ambitious than the 50-mile automobile speedway proposed several months ago is one for which incorporation papers have been applied for in this State. It is proposed to build an automobile oval, 9 miles in circumference, having two tracks, one for speeding and the other for road work. Like its predecessor, the scheme is of Long Island irigin.

John A. Anderson, 26 Court street, Brooklyn, is the legal representative of the corporation. The incorporators are given as Titus W. Cramer, New York; G. C. Bryant and A. M. Ethwood, of Brooklyn; Samuel J. Reilly, of Bath Beach, and Henri D'Olliyer, of Paris. The latter, it is said, will have charge of the construction of the road.

The speeding portion of the latter will be banked at the turns and constructed of steel with a corrugated surface. Both it and the ordinary road will be 100 feet wide. A club house, timing station and other adjuncts of a well equipped track form part of the plan. Its projectors expect at least a portion of the track to be ready by Spring.



#### **CHANGES UNDERGONE**

## Some of the Principle Points of Advance Made Toward Standard Design.

"The motors have undergone some change, as everyone is adopting vertical cylinders, with only a few exceptions, and here again the tendency of last year is accentuated in the increasing employment of relatively low speed engines for light carriages," says a foreign writer. "Many of them run normally at 750 and 800 revolutions, and the others rarely exceed 1,200 revolutions.

"The economy and durability of these motors would seem to more than counterbalance the slight increase of weight. The high speed motors are still preferred on the smaller carriages, where weight has to be considered, but it must be confessed that the building of engines running at 2,000 revolutions has created a certain reaction against this type of motor. It is feared they cannot last. The comparatively low speed engines are now fitted to light carriages with powers of 8 h.p. and 10 h.p., and even 15 h.p., and it is by no means certain that we have yet got to the limit of power for this type of vehicle.

"The improvements carried out to the motors are chiefly the casting of the cylinder and head in one piece, the use of external valves being, moreover, of large diameter, driving the pump from the motorshaft by gear, and regulating the admission instead of the exhaust, though a certain number of makers still employ the latter system on the plea that it results in greater economy and elasticity to the motor, since the compression is always the same. But it is on the ground of economy that the majority of firms have returned to the method of regulating the admission of gas.

"The magneto system of ignition is coming into more favor, though some firms are apparently so far from being confident in its reliability that they are using it in conjunction with electrical firing.

"The remarkable success of a few types of popular cars which use shaft transmission has induced a considerable number of makers to employ this system, and the shaft, with the train balladeur, is very prominent in the show. The fixed and sliding trains of spur wheels have, in fact, almost entirely outlived the many devices for keying the loose wheels in mesh, chiefly on account of their simplicity and cheapness and ease of manufacture. The train balladeur has certainly some drawbacks, but it possesses the advantage of being more practical than gear composed of numerous parts, often forming a very complicated arrangement. The gear has thus reached a point beyond which it is difficult to find anything better.

"The belt does not show up prominently, and is principally used under conditions where it runs at a constant high rate of

speed, so as to get sufficient adherence without the employment of jockey pulleys. Expanding pulleys are making a little headway, and would seem in theory to be an ideal form of transmission, but a good deal more experience is needed before anything can be said about their efficiency."

#### For Quick Stopping.

In high speed cars the means at hand for suddenly checking speed are of manifest importance. Upon their efficiency, and, even more upon their readiness of application, frequently depends the safety, or even life, of the occupant or occupants.

This fact has been borne in mind by the designers of the Mercedes-Simplex, and in the hands of a careful and skilful driver the chances of accident are almost nil. For example, all the brakes take the clutch out, and the throttle lever has a most powerful effect in instantly slowing down. The steering of this car is such that one hand on the edge of the wheel, even at 110 kilometres an hour, is quite ample. The other hand should be on the throttle valve, and lying also on a spoke of the steering wheel, while the left foot is against the clutch pedal and the right against one of the brake pedals, which are both placed, not under the toe as in the Panhard car, but facing the driver in such a manner that when he sits back in his seat they form a kind of footboard to keep him in it. Thus, instead of pressing the toes down with an effort to stop suddenly, the driver has only to straighten his legs at the knee, and he has the full purchase of the back of the seat to help him, while his right hand closes the throttle almost automatically.

#### Paris Boulevard for All Kinds.

Divided into nine different sections, viz., two for gardens, two for pedestrians, two for cyclists and one each for automobiles, carriage horses and a trolley line, a magnificent new boulevard is planned for Paris.

The length of the road will be 13½ kilometres, and the width will be 45 metres. It will run to the beautiful forest of Saint Germain, and will cross the River Seine three times, the first time when it joins the road across the bridge of Neuilly, a second bridge crosses the Isle of Chatou, and a third between Carrieres-sous-Bois and Mesnil-le-Rol. The sketch below shows the admirable plan of the road, in the centre of which there is to be an electric railway, with a station at the motor quarter of the Porte Maillot:

5.0 m.-Space reserved for gardens.

3.50 m.-Foot passengers,

7.50 m.—Harnessed horse carriages.

2.50 m.-Cyclists' route.

8.0 m.-Central electric railway.

2.50 m.-Cyclists' route.

7.50 m.-Route for automobiles.

3.50 m.-Foot passengers.

5.0 m.-Space reserved for gardens.

The road will really be a magnificent addition to the wide boulevards and splendid thoroughfares that radiate from the heart of Paris to the beautiful environs of the city.

#### **INTERESTING READING**

From the Log of a Tourist Spending the Summer in the White Mountairs.

There is interesting reading in the log of Charles G. Stevens, a Boston business man who resides at Lynn, Mass. He has spent a considerable portion of the summer touring in the White Mountain district.

"We made the trip from Boston to Rochester, N. H., a distance of 92 miles, in eight hours, including a stop for luncheon at Exeter, N. H. The roads are splendid, except for a few miles of sand south of Rochester. The next morning we rode to Ossipee, 30 miles from Rochester.

"The ride was a very pretty one, and the roads were good. Ossipee was such a pretty place, situated among the hills, that we remained there during the rest of the day, starting early the next morning for North Conway, 35 miles distant, reaching it at noon. The roads are sandy in places between Ossipee and North Conway, but not so bad when all is said and done.

"The next day our run was to the Mt. Pleasant House, 32 miles north of North Conway. The ride was through the Crawford Notch, and, although I have driven an automobile 7,000 miles and over, this was the finest trip I have ever taken. The roads are good and the scenery is grand.

"Every one should go through the Crawford Notch in an automobile to appreciate its beauties. I have been around more or less in New Hampshire, and find the roads generally good, although, of course, not equal to city roads. Touring should be taken slowly, and speed should not exceed 12 miles an hour, especially in the mountains. Plenty of oil should be used on the engine—much more than is necessary to use when running over city roads.

"In two months and more in touring through New Hampshire there has not been a day when I have been unable to ride. Although I have a chauffeur, one is not necessary except to save work for one's self."

#### Toledo has a Club.

The Toledo (Ohio) Automobile Club was organized the first of the week. Dr. Charles P. Wagar was elected chairman and H. C. Tillotson secretary. In addition to the officers named, there were present Grant Williams, George D. Palmer, jr., F. H. Dodge, J. N. Bick, George R. Ford, C. Daudt, Louis A. Leffring, F. J. Landgraf, George L. E. Beilstein, A. S. Raymond, G. A. Kennedy, George Trout, L. Lichtie, Detwiler, W. N. Braun, V. M. Falardeau, C. B. Spitzer, D. W. Murphy, W. H. Potter, H. R. Felker, Ezra E. Kirk, H. H. Brand, M. G. Bloch, Guy R. Ford, Jerome H. Smith, M. A. Scott, J. J. La Salle, Norman De Veaux, and two out of town visitors, Theodore C. Whitcomb, of Indianapolis, and Orlando Weber, of Mil



#### **CHANGE SPEED DETAILS**

## Relative Position, of Parts and How the Machanism Works.

While the transmission mechanism here shown is of the accepted sliding gear type, it possesses a number of interesting features that make it interesting, not the least of which is that it is the transmission mechanism of the 16 horsepower gasolene touring car manufactured by the International Motor Car Co., of Toledo, Ohio.

Figure 1 illustrates a vertical section of the transmission, including the cutch and flywheel, with the gears and clutch pedal shown in perspective. Figure 2 illustrates the transmission mechanism, with the upper half of the aluminum transmission case removed. In figure 1 the reverse gears are not shown, whereas they may be plainly seen in figure 2.

Referring to figure 1, H is the engine shaft, which is elongated and carries at its extremity a ball thrust bearing, against which the outer end of the clutch spring, A, presses, whereas the other end of this spring presses against the clutch member, a, thus holding the clutch in driving relation to the flywheel member, B. It will be readily seen that the object of this construction is to equalize the usual end thrust in the main bearings of the motor shaft.

The tension of the clutch spring, A, is regulated by the aut and check nut at the extremity of the engine shaft; these nuts being accessible upon turning a movable sleeve exposing the angular space, I, into which a suitable wrench may be inserted. M is the clutch pedal, and 9 the fork which actuates the movable clutch member a when the pressure of the foot is applied to the pedal, M. The relation of the floor and carriage dash is shown in Figure 2. The aluminum

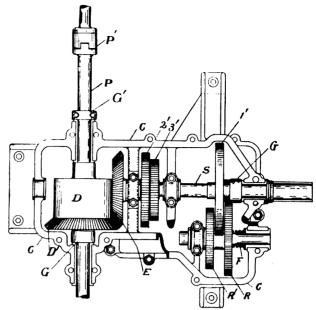


FIGURE .

transmission case, Figures 1 and 2, is marked C.

The primary shaft, Figure 1, carries three pinions, Nos. 1, 2 and 3, while the secondary shaft, S, carries three gears, 1', 2' and 3'. When No. 1 pinion is in mesh with gear 1 the vehicle is running on the first, or slowest, speed; when No. 2 pinion is in driving relation to gear 2' the carriage is running on the second, or intermediate, speed, while a high speed is effected when pinion No. 3 is driving gear 3', as shown in the illustration.

The secondary shaft carries the driving bevel gear E, which is in constant mesh with the gear D, which is attached to the end of the differential, D, thus driving the countershaft, P (see Figure 2). Ball thrust bearings, G (Figure 1) and G-G (Figure 2) are fitted to reduce the usual end thrust.

The pinions 1, 2 and 3 on the primary shaft are shifted by means of a yoke or fork

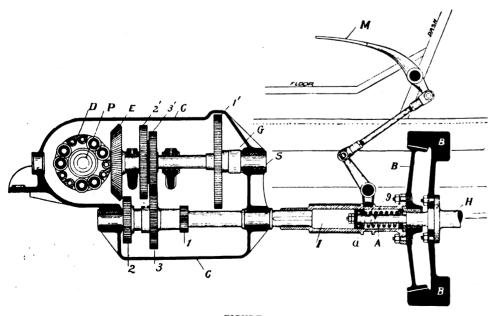
suitably attached to the hand operating lever, which fork engages in the groove between pinions 2 and 3, Figure 1).

Referring to Figure 2, C, C, C, is the lower half of the transmission case; P is the countershaft; P' one of the universal joints, of which there are two, to relieve undue stress in the countershaft bearings while the car is being driven. S is the secondary shaft; E the secondary shaft bevel gear driving a differential bevel gear, D'; 1' is the slow speed gear; 2' is the intermediate speed gear, and 3 is the third, or high speed gear. The primary shaft pinions, being below these gears, are not shown.

The reverse gears, R and R', are mounted on a short separate shaft, provided with suitable bearings below the secondary shaft, S, and in front of the primary shaft. These gears are not shown in Figure 1.

The reverse is operated in the following manner: Moving the change speed hand lever to the reverse position when the first speed gears are in driving relation, shifts the pinion 1 until it meshes with reverse gear R. A further movement of the reverse lever causes both reverse gears, R and R', to move with the pinions of the primary shaft, the driving relation being maintained between pinion 1 and reverse gear R until the reverse gear R' meshes with secondary shaft gear 1'. When the driving clutch is released the pinion (Figure 1) is in mesh with the reverse gear R (Figure 2), and the reverse gear R' is in mesh with the secondary shaft gear 1'. The interposition of the reverse gears between the driving pinion 1 and the secondary shaft gear 1' causes the secondary shaft to rotate in the opposite direction to its motion when directly driven by the primary shaft pinion 1.

When the speed lever is thrown forward in order to engage the first forward speed gears the spring F (Figure 2) forces the reverse gears back into their original position,



and they remain idle until again called into requisition by reversing the change speed lever

This transmission mechanism is made in the best possible style. All of the gears and pinions are cut from drop forged blanks made at the factory of the International Motor Car Co. The teeth are bevelled off to facilitate their proper meshing when it is desired to bring the different systems into driving relation.

The differential D (Figures 1 and 2) is of the spur gear type. The aluminium transmission case C .s so arranged that the upper half of the case may be removed without disturbing any of the mechanism within, while a suitable covered observation opening is made in the upper half, removing the cover of which the condition of the gears, etc., may be readily seen.

The movable clutch member A is cast of aluminum and leather faced. Thec lutch pedal connecting links and forks are all drop forged and made in the most thorough manner.

The transmission case is kept about half filled with a heavy lubricating oil, which insures perfect lubrication of the various parts, whereas the exterior, secondary and countershaft bearings are lubricated from the pressure lubricator attached to the dash of the car.

#### Value of Racing Experience.

"I well remember on the never to be forgotten 1,000 mile trial of the 12 h. p. Panhard which the Hon. C. S. Rolls had just brought over from Paris, and which was the wonder and marvel of the competition, and at each control there were stories of the prodigious speed at which he had arrived," says a French motorist. "I remember, too, how the wiseacres shook their heads and said that these racing cars were no good for anything else and would never be used by sensible people. The 12 h. p. Panhard became, of course, the ideal touring car a few months later, and is now relegated to the category of under powered cars.

"Practically year after year the same thing has happened, that is to say, the racing car of one year has become the touring car of the next, apart from a few exceptional cases, and I firmly believe that the same rule will hold good, for the principle underlying it is sound and logical. Every pound of useless weight done away with, provided it does not impair the strength, means less petrol for a given distance, less wear and tear of tires, etc., and thus an economy all round; whilst increase of power means the possibility of keeping up a regular and reasonable speed all day long on the level and up hill, for although a high powered car can scorch there is no necessity for it to do so.

"A well bred horse can get over the ground quickly, but one is not in the habit of seeing the owners of such creatures madly galloping down a main road."

The Northern Manufacturing Co., of Detroit, Mich., makers of the Northern ear, has increased its capital from \$30,000 to \$50,000.

#### What Lozier Launches Did.

The absolute reliability of a good gasolene motor was strinkingly demonstrated recently by a launch trip from Plattsburg, N. Y., to the Thousand Islands and return, which a Motor World man took in company with E. R. Lozier, of the Lozier Motor Co.

Two boats were taken, each equipped with a 15 horsepower Lozier motor. The distance travelled was somewhat in excess of 600 miles, the trip occupying about two weeks.

During all this period, and over the entire distance, but one stop caused by any operating difficulty was encountered, and this was due to an overheated bearing. This trouble was adjusted after a total delay of less than ten minutes.

Both motors were brand new, having been installed and tested only the day before the trip began.

Through heavy seas in Lake St. Francis and Lake St. Clair, up through the strong currents of the mighty St. Lawrence, up the Galop Rapids, where the ascent is like unto climbing a flight of stairs, and finally back down the swift rushing Platt and South Sault rapids, both boats ploughed steadily on their way, never even missing an explosion, and with an entire freedom from annoying vibration, noise or odor.

Under the circumstances the performance was exceptional, and a splendid illustration of what a gasolene motor is capable of when constructed with the perfect accuracy that characterizes the Lozier engine.

Up to the present time the demand for their engines and launches has taxed even the facilities of the great plant at Plattsburg, but the opportunity the automobile offers has not been lost sight of by any means, and the company may be expected to give the land machine their attention in the very near future. When they do, it is safe to say that the brains and skill which made the Cleveland bicycle famous all over the world will produce a motor vehicle that will be a credit to the American industry.

#### This Gear Reverses Itself.

Speed change gear troubles of all kinds, together with the loss of power consequent upon the use of the present complicated appliances, are to be done away with by the invention of a New Haven man, E. V. Lavigne. "Lavigne's invention is that of an automatic cog wheel, which reverses itself, changing from a high to a low gear by a simple attachment to the handle in front of the seat. The gear is called a 'high low gear,' and a person by a simple movement of the hand can, upon reaching a hill, change the gear from a high to a low, and when level ground is again reached the high gear is just as easily and simply put in operation.

"Representatives from several large auto manufacturing concerns have made Mr. Lavigne offers for his invention, and he has them under consideration."

#### The Week's Patents.

708,502. Hydrocarbon Motor. William J. Still, Wimbledon, England. Filed Aug. 31, 1901. Serial No. 73,933. (No model.)

Claim.—1. A hydrocarbon motor comprising a rotary carrier, a support therefor, motor cylinders fixed tangentially to the axis of said carrier and each provided with a piston, a normally stationary crank shaft or body provided with a crank pin, and around which said carrier and cylinders are mounted to rotate, a rock shaft mounted at the outer end of each cylinder and provided with an inner crank arm connected to the piston of the corresponding cylinder and with an outer crank arm, and link mechanism connecting the outer crank arms to said crank pin, substantially as described for the purposes set forth.

708,518. Explosive engine. Albert T. Bossett, Kansas City, Mo. Filed Aug. 26, 1901. Serial No. 73,400. (No model).

Claim.—I. In an explosive engine a plurality of piston cylinders, a crankshaft, a gear wheel secured on said shaft, a stationary pinion driven by said gear wheel, a cam wheel mounted rotably on said shaft, an internal gear in said cam wheel, driven by said pinion, a plurality of cams, corresponding in number to number of cylinders, mounted on the face of said cam wheel so as to be movable radially, governor levers pivotally secured to said cam wheel and connected to said cams in such manner that oscillation of said governor levers will shift said cams radially. weights on said governor levers, springs opposing the centrifugal pull of said weights and admission valves operated by the revolution of said cams, substantially as described.

708,579. Driving gear. John Nutry, Midpand Park, N. J., assigner of two-thirds to Carl P. Lenk and Rudolph Lenk, New-York, N. Y. Filed Oct. 1, 1901. Serial No. 77,197. (No model).

Claim.—I. The combination of a reciprocating driving member, a driven part mounted to turn, a driving part mounted to ascillate about the axis of the driven part and provided with an outwardly extending guideway, an intermittent grip device forming a driving connection between said oscillating, driving part and the driven part, connecting mechanism from the driving member to the driving part, said connecting mechanism comprising an adjustable member arranged to slide along the guideway of the driving part, a link pivotally connected with said connecting mechanism at the adjustable member there, and an adjustable carrier on which said link is fulcrumed.

708,637. Combined gas and steam engine. William Heckert, Findlay, Ohio, assignor of one-half to Henrly W. Seney, Toledo, Ohio, Filed Oct. 29, 1901. Serial No. 80,433. (No model).

Claim.—1. A self-contained motor or engine comprising in a unitary structure a cylinder having a water space around the same, a subjacent waterway or passage extending upwardly in a serpentine or zigzag course from a source of supply to said water space, heat flues extending downwardly from said cylinder to the exhaust through said serpentine or zigzag waterway, and a piston working in said cylinder having a suitable connection with the driving shaft, together with mechanism for automatically controlling the admission and exhaust of steam at one side and of explosive gases on the other side of the piston rod, to actuate the latter by the expansive force of said gases and steam, operating alternately to



drive the piston in opposite directions; substantially as described.

708,691. Oil burner. George W. Arper, Oakland, Cal. Filed May 1, 1901. Serial No. 58,282. (No model).

Claim.—1. A burner comprising a casing having alined openings through the wall thereof, a removable cover for said casing, an oil supply at the lower portion of the casing and a nozzle supported at a point adjacent to one of the openings in the casing and adapted to discharge a jet of steam through said opening into the flame of burning oil and out of the opposite opening to induce the discharge of the burning fuel in the direction of said last mentioned opening; substantially as described.

708.708. Electrode separator for batteries. Arthur W. Harrison, Los Angeles, Cal., assignor of two-thirds to F. A. Marcher, Los Angeles, Cal. Filer May 7, 1902. Serial No. 106,360. (No model).

Claim.—1. In a batteey an electron, separator composed of yucca having the non-fibrous portion thereof removed.

2. In a battery an electrode separator therefor composed of the fibrous portion of yucca.

3. As a new article of manufacture a battery electrode separator of yucca deprived of the non-fibrous portions thereof.

708,729. Vertical Steam Boiler. William Penman, Glasgow, Scotland. Filed Aug. 19, 1901. Serial No. 72,544. (No model).

Claim.—1. A vertical steam boiler, comprising the usual outer shell, in combination with an inner shell formed with dished portions arranged in pairs opposite each other, one of each pair being in proximity to the fire grate and the other to the furnace crown, cross rows of inclined tubes expanded into these dished portions approximately at right angles to the dished surfaces, and additional rows of tubes extending horizontally across the boiler above said inclined rows of tubes and orifices in the outer shell covered by doors, substantially as described.

708,758. Steam motor. Irving S. Davis, Scranton, Pa. Filed Nov. 2, 1901. Serial No. 80,919. (No model.)

Claim.—1. A steam motor comprising a pair of crankshafts suitably geared to revolve in unison, a pair of steam cylinders opposite each crankshaft, pistons within said cylinders, connecting rods connecting each crankshaft with the pistons in the opposing pair of cylinders, a valve for each steam cylinder adapted to control the inlet and outlet of steam thereto, and an adjustable controlling valve and ports being arranged to cause the motor to operate either simple or compound, according to the position of the controlling valve.

708,793. Motor vehicle, Henry F. Borbein, St. Louis, Mo., assignor to Gus V. Brecht Butchers' Supply Company, St. Louis, Mo., a corporation of Missouri. Filed July 2-1. 1902. Serial No. 116,802. (No model.)

Claim.—1. In a motor vehicle the combination with a frame adapted to support the body, of a spring, a bearing for the driving axle secured to said spring, a strut rod secured to said bearing, a link pivoted at one end to said strut rod and at the other to said spring, and means for supporting said strut rod.

2. In a motor vehicle the combination with a frame for supporting the body, of a spring, a bearing carried by said spring, a strut rod secured to said bearing, a link pivoted at one end to said strut rod and at the other to said spring, and a hanger secured to said frame and supporting said strut rod and link.

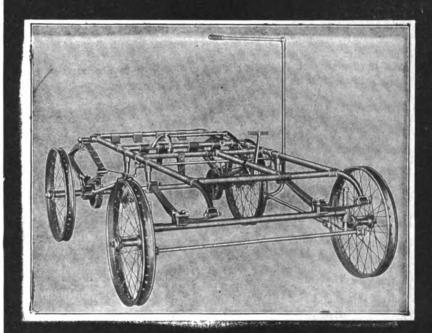
708,803. Dynamo and magneto-electric

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machine. Nathan H. Edgerton, Philadelphia. Filed, Aug. 22, 1902. Serial No. 72,866. (No model.)

Claim.—1. In an electric machine, the combination of an armature, an annular frame, spacing devices secured to the inner periphery thereof at diametrically opposite points, and having bevelled edges which contact with the ends of the curved magnet strips, the latter being retained in position by their contact with said spacing devices, said strips being concentric with and within the plane of rotation of the armature.

708,826. Carbureter. Francis Paul, jr., and Albert F. Gundlack, Sorel, Canada, assignors of one-half to Walter Tylee Ross, Montreal, Canada. Filed Oct. 28, 1901. Serial No. 80,309. (No model.)

Claim.—1. A gas generator comprising a carbureter containing a body of hydrocarbonaceous substance; a main air supply and branch supplies leading therefrom, said branch supplies being immersed at different levels in said hydrocarbonaceous substance for supplying air thereto below the surface thereof; a float supporting said branches, and valvular means for varying said supply to flow through one or all of said branches, and means for collecting the carbonized air, for the purpose set forth.

708,864. Resilient tire for vehicle wheels. William E. Carmont, Kingston-upon-Thames, England. Filed Mar. 10, 1902. Serial No. 97,546. (No model.)

Claim.—1. In combination, a rim of a wheel provided with a peripheral channel, a plurality of segments mounted in said channel and each formed with a plurality of interiorly arranged boxes, each of the segments further

provided with openings, cushions arranged in each of the boxes of the segments, and means extending through the walls of the channel and through the openings of the segments for securing the latter to the rim.

708,949. Motor vehicle. Edgar A. Wright, Canton, Ohio, assignor to the Aultman Company, Canton, Ohio, a corporation of Ohio. Filed Dec. 13, 1900. Serial No. 39,772. (No model.)

Claim.—1. The combination of the truck frame, the steering wheels, the pivoting devices connecting the steering wheels with the truck frame, the power transmitting devices at the axis of said pivoting devices for actuating the steering wheels, and a motor situated between the front and rear wheels operating in lines transverse to the vehicle and connected with said power transmitting devices, substantially as set forth.

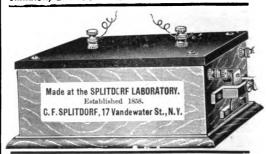
708,962. Electric vehicle. Susie A. Henry. Denver, Col., executrix of John C. Henry, deceased, assignor to Stanley Electric Manufacturing Company, a corporation of New-Jersey. Original application filed June 3, 1800, Serial No. 719,264. Divided, and this application filed Dec. 27, 1901. Serial No. 87,425. (No model.)

Claim.—1. A controller for a pair of motors comprising contacts and connections adapted and arranged, in one position of the controller, to connect the motors in parallel, in opposite relation to each other, each armature being in series with its field, and in a succeeding position cross connecting them so that each armature is in shunt with the field of the other motor and in series with its own field.

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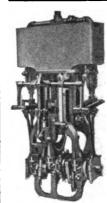
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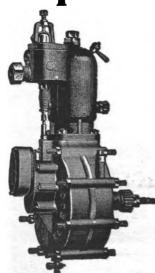
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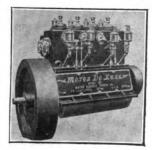


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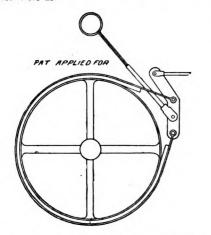
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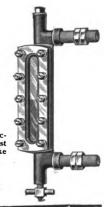
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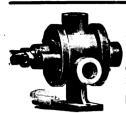


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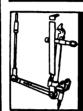
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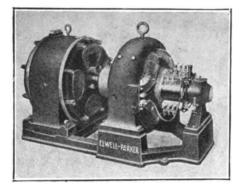
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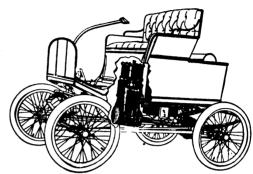
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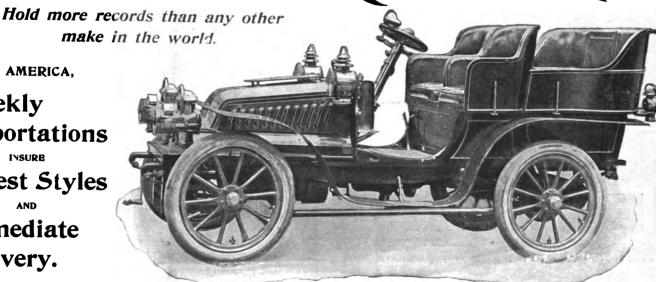
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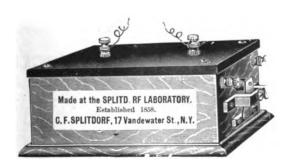
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#### The VICTOR STEAM PUMPS.

Weight 4½ lbs.; space required in carriage 9 in. in length x 3 in. in diameter

AIR PUMP. Capacity 80 lbs. pressure on fuel tanks or tires in one minute, with a boiler pressure of 125 to 150 lbs. WATER PUMP. Capacity 3 gallons per minute against 200 lbs. boiler pressure.

PRICE, \$30.00 each.

These pumps have been adopted by the Locomobile Company, the Mobile Company and other leading manufacturers of steam carriages.

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The grade is shown by the location of a bronze ball running in a graduated concave tube filled with spirits.

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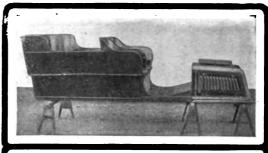
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## THE MOTOR WORLD.

## A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE AND KINDRED INTERESTS.

Volume IV.

New York, U. S. A., Thursday, September 25, 1902.

No. 26

#### THE RUSH FOR SHOW SPACE

## Readjustment of Floor Plans Fails to Provide Enough—Allotments Made but Withheld.

The rush for space on the main floor of the Madison Square Garden Show almost literally swamped the management.

All during last week applications continued to pile up until orders for 24,000 feet were in hand. With but 17,000 feet at their disposal, the position of the managers may be readily imagined. Even the new diagrams which they had prepared helped matters but little, such prominent concerns as the Electric Vehicle Co., the National Vehicle Co. and a number of others being left in the lurch. The use of the restaurant as an exhibit hall is now contemplated as a means of providing for the overflow.

The rearrangement of the spaces as disclosed by the new diagram shows two central rows instead of one as heretofore, pride of place—the two stands directly facing the entrance—having been secured by the White and the Winton interests, respectively. The outer row of exhibits, which encircled the others and which formerly backed up against the arena boxes, have had an aisle thrown behind them and now stand out on the main floor.

The demand for space in the gallery has not yet reached its flood, but with the date of the show more than three months removed, that it will all be contracted for goes without saying.

The allotment of spaces was made this week, but as it is expected that there will be a deal of readjustment necessary, the numbers will not be made public. The exhibitors, however, are as follows:

On the main floor:

International Motor Car Co., Toledo, O.; Pan-American Motor Co., Mamaroneck, N. Y.; Knox Automobile Co., Springfield, Mass.; Autocar Co., Ardmore, Pa.; United States Long Distance Automobile Co., Jersey City; White Sewing Machine Co., Cleveland, O.; Smith & Mabley, New York; Locomobile Company of America, New York; Baker

Motor Vehicle Co., Cleveland; Waltham Manufacturing Co., Waltham, Mass.; Olds Motor Works, Detroit; George N. Pierce Co., Buffalo, N. Y.; Vehicle Equipment Co., New York; Studebaker Bros. Manufacturing Co., South Bend, Ind.; B. V. Covert & Co., Lockport, N. Y.; Upton Machine Co., New York; Crest Manufacturing Co., Cambridge, Mass.; Spaulding Automobile & Motor Co., Buffalo, E. R. Thomas Motor Co., Buffalo, N. Y.; Thomas B. Jeffery & Co., Kenosha, Wis.; Berg Automobile Co., New York; Winton Motor Carriage Co., Cleveland; Automobile Company of America, Marion, N. J.; Pope-Robinson Co., Hyde Park, Mass.; Fournier-Searchmont Automobile Co., Philadelphia; J. Stevens Arms & Tool Co., Chicopee Falls, Mass.; Mobile Company of America, Tarrytown-on-Hudson; Foster Automobile Manufacturing Co., Cleveland; Ohio Automobile Co., Warren, O.; C. J. Moore Co., Westfield, Mass.; Loomis Automobile Co., Westfield, Mass.; Meteor Engineering Co., Reading, Pa.; Automotor Co., Springfield, Mass.

On the gallery:

Hartford Rubber Works Co., Hartford, Conn.; Metallic Rubber Tire Co., New York City: Baldwin Chain & Manufacturing Co., Worcester, Mass.; Badger Brass Manufacturing Co., Kenosha, Wis.; Joseph Dixon Crucible Co., Jersey City, N. J.; B. F. Goodrich Co., Akron, Ohio; Veeder Manufacturing Co., Hartford, Conn.; Gray & Davis, Amesbury, Mass.; National Carbon Co., Cleveland, O.; Atwood Manufacturing Co., Amesbury, Mass.; Buffalo Gasoline Motor Co., Buffalo, N. Y.; Standard Welding Co., Cleveland, Ohio; American Ball Bearing Co., Cleveland, Ohio; Whitney Manufacturing Co., Hartford, Conn.; Dow Portable Electric Co., Boston, Mass.; Charles E. Miller, New York City; C. J. Wetzel, New York City; Diamond Rubber Co., Akron, Ohio.

#### Will Reorganize With New Name-

On Tuesday application was made at Newark, N. J., to Vice-Chancellor Emery to confirm the sale of the Automobile Co. of America to Richard C. Currier. Objection was made by F. L. Widerwood, who claimed that a note for \$2,500 among the assets belonged to him. It was agreed to exclude the note without detriment to the rights of the purchaser to bring suit. The sale was then confirmed.

The new management will take hold on October 1, when there will be a complete reorganization, includinging a new company name.

#### FIRE ENGINE CO. COMES IN

#### Will Manufacture Gasolene Cars at Elmira— Marketing Will be Done by Others.

With little or no intimation that anything of the sort was contemplated, the formidable International Fire Engine Co., of this city, has embarked in the manufacture of motor vehicles; they already have matters so well in hand that no less than President George R. Bidwell this week told a Motor World man that their product will be on the market within six months.

While the Fire Engine Co. will manufacture the cars in one of their plants—the one at Elmira, N. Y.—and while they will bear their name as manufacturers, the company will not directly market the goods. Mr. Bidwell stated that this will be done by three gentlemen whose names he could not now make public, who were forming a partner-ship for the purpose.

The product will be high grade gasolene cars entirely, with upright engines and of about twenty horsepower.

Mr. Bidwell said that they had purchased and experimented with practically all of the better known American and foreign cars and would profit thereby. The Elmira plant will make every part of the carriages that are in view, and with the facilities and experience at their command he did not anticipate any trouble in having goods on the market within the six months limit.

Asked whether the move forecasted automobile fire engines, Mr. Bidwell remarked, rather dryly:

"One of our plants, the Amoskeag, has been producing them for thirty years."

#### Diamond Factory in Scotland.

Operations have been commenced on the factory of the Diamond Rubber Company, to be established at Glasgow, Scotland. American machinery is to be installed. Among those interested in the project in England is W. Alexander Smith, vice-president of the Diamond Match Company.



#### WINTON'S WAYS

## He Talks of his Record Ride and Other Experiences and Lats Fall Some Advice.

Cleveland, Sept. 19.—The unanimous verdict of all who were present at the Cleveland meet last week was that it was the most successful event of the kind ever held in this country. Not one who was there will soon forget the spectacle of Alex Winton as he shot round the yellow track at a truly fearful gait. In a chat with Winton after the race he said that it didn't seem to him that he was going so far below the record; that even greater speed would have been attained but for one or two soft spots in the track.

In speaking of the Bullet, Mr. Winton stated that its greatest point of superiority, and the chief difference between it and his previous machine, was that where the other made its speed by "rushing the straights" and slowing down on the turns, the Bulletmade an even speed all the way round the track. Of course, this is accomplished by the position of the motor and the general balance of the machine-things a good many people would give much to know. The old racer, Mr. Winton said, would reach a speed of 75 or 80 miles on the straights, then slow down to about 45 miles on the turns, grinding and tearing away as she strained round, whereas the Bullet runs evenly all the time.

In describing how the slightest irregularity of surface is felt when travelling at great speed, Winton described how the machine leaves the ground, and then it is that a cool head and steady hand are indispensable. Last year in Detroit, when on one of his record trials, a slight dip in the track threw the machine completely round, so that it headed the other way. To attempt to stop the motor would have been fatal. Winton himself declared that he was frightened half to death, and was undecided whether to go back up the track or turn around again. Wm. E. Metzger, who was present, declared that on going down to the track immediately afterward it bore the appearance of having had some gigantic shovel scoop out a halfdozen shovelfuls where the rear wheels had come whirling down.

It was noticed that Winton at Cleveland sometimes hugged the pole going into the turns, and again swung wide, while at times he shot clear across the track, bringing around in a cloud of dust which was immediately left far in the rear almost as soon as it ascended. On this being called to his attention, he said he was trying the track to find out the best course. To any one who witnessed that mad, wild rush and roar, the idea of picking a course or of attempting to do anything else than stay on the track at all, seems incredible, and yet it is so. Winton, when driving his mighty machine, was absolutely self-possessed at all times. For instance, it was noticed that just previous

to the pursuit race in which he reeled off miles in 1:02½ and 1:03, he was puffing away contentedly at a cigar, and had it between his teeth when the pistol cracked. When the race ended he still had it, though the rush into the wind had blown the fire out of it in no time.

One thing he said that the amateur speed driver will do well to bear in mind: "Once you fix on a course, don't attempt to change it, no matter what happens. Take a different course the next time round if you will, but at speed, once a path is selected, to attempt to vary it on the curves is to invite disaster. It takes but the fraction of a second to go clear across the track, and then it's all over."

Harkness, who was present, heartily agreed with the older man, for whom it is readily seen he has a deep admiration.

And this young man, by the way, made a deep impression by the thoroughly manly sportsmanship he displayed, and by his gentlemanly bearing toward every one. It must have been a disappointment to him that the big Mercedes for which rumor has it he paid \$22,000, and which was supposed to be one of the fastest machines in the world, should have been so far outclassed by Winton's latest creation; but if it was, he gave no sign, and readily, even eagerly, entered the pursuit and handicap races when defeat was a certainty after the comparative showing in the first race. Without him the programme would have fallen flat. As it was, he put life into it, and his bearing both on and off the track proved him the gentleman he is.

Though prevented by over-weight of his car from winning the cup in the race in which he finished first, no one was quicker than he to see the justice of the ruling. It is more than likely, however, that he will not be long without a souvenir of his appearance at Cleveland.

The trade was liberally represented at the meet. In addition to all the local men, R. E. Olds, of the Olds Motor Works; James Becker, of the Elmore Mfg. Co.; J. M. Packard. of Ohio Auto Co.; Thomas Midgely and Col. Pardee, of Chicago; W. J. Stewart, chairman of the A. A. A. Racing Committee; C. H. Tucker and a party who drove over the road from Chicago; H. E. Raymond, W. H. Kirkpatrick, of the Hartford Rubber Works, and many others, were present.

#### Military Motor Cars.

Lord Roberts and his staff were conveyed from point to point by motor car during the recent inspection of the military stations on the Ketish coast of England. After a long day's drive the commander-in-chief of the British army examined the cars, driven by Mark Mayhew and C. S. Rolls, and expressed the opinion that military motor cars for fast communication work would have been of immense service in the Boer war. Lord Roberts is greatly in favor of Mark Mayhew's scheme to form an automobile volunteer corps. The question of a money grant for this purpose is already under consideration by the War Department.

#### **DETROIT OFF**

## Rain Causes Postponement of Meet There—Many Notables had Gathered—Who They Were.

Detroit, Sept. 20.—The rain which caused the postponement of the meet here proved a severe disappointment; the postponement of the meet deranged many plans. There was no help for it, however. Winton, Harkness, W. J. Stewart, Wm. E. Metzger, a Motor World man, and others went out to the track, where the case was seen to be hopeless, the slippery mud being inches deep.

Though the postponement must have been a severe blow to Metzger and his associates, they accepted the situation with good grace and did all in their power to entertain the visiting delegation.

If the boat leaving Cleveland for Detroit on Wednesday night had gone down, nearly the whole automobile trade of the country would have been wiped out. Alex Winton, Charley Shanks, Percy Owen, Walter C. Baker, M. L. Goss, Fred C. Phillips, Philip Dorn, Geo. Weiss, L. P. Mooers, Frank D. Dorman, McCrea, Dunham, Clarence Whitney and Col. Pardee were just a few of the leading lights, with a host of newspaper men in their wake.

Several good deals were closed by visiting dealers and manufacturers. W. J. Stewart, who is the head of the New Jersey Auto Co., by far the largest dealers in that State, secured the Northern Runabout for the territory he represents, and immediately wired home to push the sales of the durable little Detroit car at once.

Frank D. Dorman, of the American Motor Carriage Co., brought with him a runabout that was a revelation, and conceded to be one of the handsomest cars seen anywhere. It is a medium weight car, of about 1,200 pounds, six horsepower, and listing at \$1,000. That it is as good as it looks he was ready and willing to demonstrate at all times, and it was noticed that several prominent dealers who had been out in it were thereafter seen in long and earnest conversation with Mr. Dorman.

Manager McCrea, of F. B. Stearns & Co., had up a good-looking touring car, tonneau body, that attracted much attention. He promised that the new models would be even much better, a statement that caused some pricking up of ears on the part of several dealers.

Perhaps the Ohio Automobile Company were as much disappointed as any over the calling off of the races. It was said that at the factory work had been going on day and night in order to get the new Packard car complete, and that it had been the intention of Mr. Packard to himself bring it up to Detroit. This car is said to have a double cylinder motor, set upright in front, and to be entirely new throughout.

Metzger's store was crowded both days by



people eager to see the much-heralded and famous, the Baker Torpedo, resplendent in a coat of white, and which in its new dress seemed robbed of some of its uncanny appearance, was perhaps the chief attraction. It had been the intention of Mr. Baker to go for the five-mile track record for electrics in one of his famous runabouts, and that he would have put the figures low is an assured fact.

The Detroit Automobile Club opened its new quarters to-night, and a general invitation was sent to all. Though small, the rooms are cozy and tastefully furnished, and were visited during the evening by many of the out-of-town members of the trade.

#### In Hands of Receiver.

The American Electric Vehicle Co. was placed in the hands of a receiver last Tuesday by Vice-Chancellor Emery. The company was incorporated in New Jersey on Dec. 1 , 1899, with a capital of \$6,000,000. The application for the receivership was made by John R. Hardin, counsel for George F. King, of East Orange, one of the stockholders. George P. Lister, of Hoboken, is the president and treasurer of the concern.

Mr. Hardin, in his prayer for the receiver, set forth that two promissory notes, one dated August 5, 1902, for \$20,000, and the other dated September 15, 1902, for \$10,000, have both been dishonored by the company. The president, when pressed for the liquidation of the claims, stated, according to the prayer, that the company had no funds with with which to meet debts. Mr. Hardin's plea says that the assets of the company are more than \$57,000 and the liabilities specified are \$42,000, and notes aggregating \$37,500. The bill also avers that the company is being sued for \$2,000 damages by John W. Newbury.

Charles J. Roe, of Jersey City, suggested as temporary receiver by Mr. Hardin, was appointed.

The company was originally a Chicago concern, where it had been experimenting and doing a small business up to the time of its removal to the East, just previous to capitalization for a large sum in New Jersey. Its existence has never been marked by an aggressive business policy, and in consequence it has never attained a position of note in automobile manufacturing. There have been internal troubles from the date of its Eastern hiegera.

#### Two Events by One Man.

The races in Provence, France, held on September 14 and 16, resulted in a double victory for Paul Chauchard with a 70 h. p. Panhard. On Sunday he covered 150 kilometers (93.2 miles) in the Criterium de Provence, near Arles, in 65m, 13s. On Tuesday, in a hill-climbing contest on Mont Vontoux, he made 22 kilometres (13.7 miles) in 27m. 13s., the average ascent being 8 per cent. Many of the grades of the route were extremely sinuous.

#### HIGHEST POSSIBLE

#### White Scores Maximum Points in England's Reliability Contest.

American commercial invasion of Great Britain has no better example of its reason than in the success of the White steam vehicles in the recent 650 miles reliability trials, held under the auspices of the club of that country, September 1 to 6 inclusive. Fifty-four vehicles started in the road test, of which forty-five completed the test and only two earned the highest possible number of points, a White six horse power steam vehicle, driven by W. C. White, and a twenty horse power Wolseley gasolene. In fuel consumption the White distanced most emphatically the other car by using only thirteen quarts of fuel, as against twenty-four quarts, one pint, for the Wolseley in the consumption test. This test was confined to but one day, Friday, no cognizance being taken of the amount used on the runs of the other five days.

Since the first announcement of the award of marks for the endurance part of the program, it transpires that the White car in question has been protested on account of lack of mudguards and a double system of brakes. From whom the protest came is not known at the present writing. The only other steam vehicles entered were Locomobiles and the much heralded Gardner-Serpollet. The highest score for a Locomobile was 1790, and the lowest gasoline consumption nineteen quarts, while the Sepollets failed of a perfect score in the test performance by twenty points and used thirty-two quarts and ten ounces of fuel as their best record in the consumption test.

The rules and systems of marking under which the event was conducted were far more stringent than anything of the kind before attempted, as is shown in the following summary:

The principle underlying the rules was that the runs were a trial of reliability, and were in no sense a race, as speed was not counted, excepting in the hill climbing tests. The trials were open to tourist cars only, racing cars not being admitted, and the manufacturers agree to sell duplicates of their cars entered in the trial at the price declared, provided the order is placed before December 1, 1902. There were two sections, as follows:

Section I. Motor vehicles entered by their manufacturers, or by the authorized agents of their manufacturers, or by private owners.

Section II. Parts of motor vehicles entered by their inventors, manufacturers, or authorized agents, as showing a distinct advance on any similar appparatus previously used in a trial held by the Automobile Club.

Class A, vehicles (cycles or cars) declared at a selling price of \$750 or less; Class B, \$1,000 or less; Class C, \$1,500 or less; Class D, \$2,000 or less; Class E, \$2,500 or less; Class F, \$3,000 or less; Class G, \$3,500 or less; Class H, \$4,000 or less; Class J, \$5,000 or less; Class K, \$6,000 or less.

Every car carried an official observer, whose duty it was to time the vehicle between the various stages en route, and to note all stoppages and repairs, etc., when any were effected. In order to prevent excess in speeds, vehicles were not permitted to pass certain points before the expiration of a stated period from the time of passing a previous point, plus the total time occupied by stops from all causes. Vehicles arriving before their time were by that fact to be disqualified from continuing the run.

A maximum number of 300 marks were given for reliability on each day's run, one mark being deducted for every minute of an involuntary stop, excepting for the three compulsory stops for refreshments, and for traffic, accidental detours, and lighting lamps. Five marks were deducted for every stop for tire troubles.

Special tests of the brakes were made on Saturday, August 30th, the tests consisting of pulling up the car on a down grade, and holding it on the up grade, marks being deducted in accordance with the inefficiency of the brakes, with no material failures.

All vehicles carried their full complement of passengers, the weight allowed per passenger being not less than 147 pounds, the deficiency, if any, being made up by ballast.

The rules provided that each passenger should be accommodated with a convenient and comfortable seat, and such as is ordinarily fitted to the car. If, in the opinion of the judges, a special body had been fitted, the car was liable to disqualification.

The time allowed each day for cleaning, adjusting, lubricating, filling tanks, etc., was two hours, and two men only could be employed upon the car. For every minute over the two hours spent upon the car, one mark was deducted, and no part could be replaced without giving notice to the club secretary. Failure to do this rendered the car liable to disqualification.

The awards will be made by adding together the marks gained by each car during the trial for (a) reliability, (b) hill-climbing, (c) horse-power and weight, (d) steering. gear, (e) brakes, and (f) condition of car at the end of the trials.

Marks to any extent may be deducted by the judges, or the car may be disqualified if, in the opinion of the judges, the steering gear or brakes are insufficient in design or material. Maximum marks for steering gear 250, for brakes 250. The maximum marks allotted in respect of the conditon of the car are 500.

Section II. of the programme for parts of motor vehicles attracted but few competitors, the total number of entries being but five. Of those which put in an appearance little was seen or heard, and no marks have Section I, was divided into ten classes, viz.; , yet been published by the officials,



The marks awarded for the hill climbing trials will be calculated as follows:

H.P x 100,000.

Price in £ x 8 for every shillingsworth of fuel consumed.

H.P=horse power as shown by performance, which, for the purpose of this formula, will be roughly calculated as follows:

Vertical height of hill in feet. X Weight of car and load in lbs. + 40 lbs, for every ton of total weight.

#### Time in minutes.

#### 33,000

The number of passengers carried during the hill climbing not to exceed the number carried during the other portions of the run.

While on the face of them the rules are stringent, they are at the same time so all embrasive as to leave many chances to tear down or build up a reputation, particularly on such fine points as "(f) condition of car at the end of the trials." Rulings on this score leave many loopholes for controversy on either side of the question.

The method of laying out each day's route was to make it an out and home run with the Crystal Palace, London, as the starting and finishing point. In general each day's run was to a different turning point, the return route varying more or less with that taken on the outward journey. In addition to the more stringent rules of this year the mileage was greater than a year ago-in the Glasgow trials-and the conditions were harder all round. In the face of all this it is a fact that among the cars which failed to score the maximum the average earnings much more nearly approach the highest possible than they did in last year's mating event.

The keynote of success was struck on the opening day with a journey of 139 miles in bad weather, over heavy roads and with many hills. The order in which they left the starting point had been determined by ballot, and it is a striking testimony to the system with which the trial was conducted that the car which was first away was also first to arrive back at the Palace. Each day's route was strictly defined in every stage as regards time, and excess of any limit involved the penalty of disqualification. Not only was there a minimum time allowance between towns, but intermediate limits were prescribed with the object of preventing any "scorching" over one portion of the route and exaggerated crawling over another. The plan worked admirably, as a rule, the occasional exceptions being due to the inefficiency or laxity of individual observers.

As on the first day, so on the succeeding ones, the ballot decided the order of the setting forth, and no vehicle could return home in advance of its position without violation of the rules, unless any one of those in front was unequal to the task of maintaining its very moderate schedule. For a fast car, which had drawn a back number, to "run through the crowd" was quite impos-

sible; all the cars were reduced to the same common level as regards speed, and only reliability was of any account. There was no semblance of a race from first to last.

These conditions made it hard for those driving comparatively high powered cars and it is more than likely that the experiences brought about will deter the entering in future events of the kind of cars with any real claims to speed. The efforts to keep down to the required twelve miles per hour was as great a strain as to keep them up to their thoroughbred speed possibilities. In one case it is related that a driver had worn the sole of his right boot clear through in the perpetual coaxing of his clutch.

The police of the various towns, with but one exception, dogged the competitors from day to day. At one place the "minions of the law" employed a covered furniture van in which to ride. At another there was a perfect hotbed of spies in hedgerows and ditches who, with characteristic meanness, selected for their timing a moderate grade on which there was no necessity to use the brake, but down which the competitors, even in a reliability trial, might let the cars descend by gravity at a somewhat faster rate than usual. Certainly tactics of this kind are beyond anything but the smallest mind when directed against the participants in a public trial of which the whole object was to establish the utility of the motor vehicle by strictly legitimate means.

Reliability being the essence of the trials, the number of points lost, from the highest possible (1800) in each class, is of interest in addition to the coveted achievement of the two vehicles which scored the maximum of marks. The winners in each class and their scores and fuel consumption (one day), are as follows:

|           |               |        |    | Fuel- |    |
|-----------|---------------|--------|----|-------|----|
| Class.    | Make.         | Marks. |    |       |    |
| A5 h. p.  | Baby Pengent. | 1,799  | 6  | 1     | _  |
| B51/2 h.  | p. Locombile  | 1,752  | 23 | 1     | 10 |
| C6 h, p.  | White         | 1,800  | 13 | _     | _  |
| D8 h. p.  | De Dion-Bouto | n1,799 | 11 | 1     | 10 |
| 1971/2 h. | p. Germain    | 1,791  | 16 | 1     |    |
| F10 h. p. | Peugeot       | 1,793  | 13 | -     | _  |
| G20 h. p  | . Wolseley    | 1,800  | 24 | 1     | -  |
| H12 h. p  | Daimler       | 1,788  | 16 |       | 16 |
| J20 h, p  | . Maudslay    | 1,797  | 8  | 1     | _  |
| K15 h. p  | . Panhard     | 1,799  | 10 | 1     |    |

In addition to scoring the maximum points, the second score in Class C was also made by a White, being 1790.

Further examination of the scoring shows that eight cars attained the maximum of 300 per day on five days out of six. Four days' records were made by nine cars. The maximum on three days were gained by eight cars. Twelve cars had complete records for two days, and the maximum score was made for one day only by seven competitors. It will be seen, therefore, from the the foregoing, that a non-stop record was attained 143 times. In three instances where the maximum points were not obtained they were only lost by one small point. With the laws of chance always ready to act adversely against those who take part in any competitive event, in no matter what field, the many losses by small margins show the established merit of the motor vehicle.

In addition to the consumption trials held on Friday there was a second series of brake tests and two hill climbing events. The idea of this second series of brake trials, held on River Hill, was to cause the vehicles to run slowly down a descent, the steepest gradient being 1 in 8.9 with an average gradient of 1 in 18.26, and to come to rest at four points selected on the steepest pitches until signalled to continue. It was thought that this would prove a severer test than that imposed upon the vehicles in the Palace grounds on the previous Saturday, but results do not appear to prove the case, as all the vehicles satisfactorily passed through the test.

One of the hill climbs was on this same hill and the other held on Westerham Hill. The steepest gradient of this latter is 1 in 7.8 for 820 feet, with a sharp turn at one point known as Hell Corner. The distance timed was about 3,700 feet. The distance timed for River Hill was about the same. The surface of Westerham was rough and greasy.

Both of the hill trials were made from a standing start, the vehicles being driven on to the mark and held on the brake, there being a slight down grade toward the rear, till the timekeeper gave the word to go, when the clutch was thrown into action. The fastest time on each hill was made by a three horse power chain driven motor bicycle. That for River Hill being 1m. 59s. and for Westerham 1m. 55s. The first three vehicles up River Hill were:

| 6 h. p. Gardnes-Serpollet | 2:321/4  |
|---------------------------|----------|
| 20 h. p. Wolseley         | 2:44 1/6 |

The correct distances covered on each of the two hill tests are yet to be learned, as at last advices they had not been officially declared, the starting and finishing points not having been selected until the day of the trials.

#### Fourteen Additional Entries.

With entries bearing to-day's postmark on the enclosing envelope, yet to be received in the next two days, there lies the margin to come up to or exceed the number of vehicles entered for the Buffalo run of last year. Including Wednesday mornings first mail, the entries totalled 57, or 14 additional to the 43 published last week being:

43 published last week being: CLASS A-UNDER 1,000 POUNDS. Entrant and make. Power. Dr. Julius F. Hovestadt (De Dion-......Gasolene Bouton) George N. Pierce Co. (Pierce).....Gasolene CLASS B-1,000 TO 2,000 POUNDS. F. A. La Roche (Darracq).........Gasolene S. G. Averill (Franklin)............Gasolene Knox Automobile Co. (Knox).....Gasolene Knox Automobile Co. (Knox).....Gasolene Knox Automobile Co. (Knox)......Gasolene C. H. Tangeman (Italian Auto Co.). Gasolene Steam Carriage Co. (Stearns) ..... ..Steam U. S. Long Distance Co. (Long Dis-. Gasolene tance) ...... U. S. Long Distance Co. (Long Dis-CLASS C-MORE THAN 2,000 POUNDS. Knight Neftel (Neftel).......Electric Percy Owen (Winton)......Gasolene

Electric Vehicle Co......Gasolene





Published Every Thursday
By

#### THE GOODMAN COMPANY.

123-125 TRIBUNE BUILDING 154 Names Street, NEW YORK, N. Y.

TELEPHONE, 2652 JOHN.

| Leadon Office, 53 Pleet Street,  |   |   | C. W. BROWN.   |
|----------------------------------|---|---|----------------|
| Paris Office, 2 Rue d'Abbeville, | • | • | R. F. COLLINS. |

| Subscription, Per Annum    |    |  | id] |    | \$2.00 |
|----------------------------|----|--|-----|----|--------|
| Single Copies [Postage Pai | d] |  |     | 10 | Cents  |
| Foreign Subscription .     |    |  |     |    |        |

Invariably in Advance

Postage Stamps will be accepted in payment for subscriptions, but not for advertisements. Checks, Drafts and Money Orders should be made payable to The Goodman Company.

General Agents: The American News Co., New York City and its branches.

Change of advertisements is not guaranteed unless copy therefor is in hand on SATURDAY preceding the date of abilitation.

These who are interested in motor vehicles will find the tackties and information of our office always at their command.

To Facilitate Matters Our Patrons Should Address us at P. O. Box 649.

Cable Address Motorworld.

Entered as second-class matter at the New York, N. Y. Post Office, Nevember, 1900.

NEW YORK, SEPTEMBER 25, 1902.

#### Emulate the Worm.

The executive committee of the New-York Division of the League of American Wheelmen is apparently hardly pressed for the want of something to do.

Certainly this is the most charitable view that can be taken of their action in drafting and having introduced in this city an ordinance that seeks to establish a board of examiners that shall pass on the competency of automobilists to drive their vehicles and that also provides for a license which may be withdrawn should the holder in any way offend the law.

As bicyclists themselves once suffered and successfully opposed almost similar impositions, and as but a few years since they were the "demons," "red devils" and "juggernauts" of the sensational press, the present proposals come with unusually poor grace. It is doubtful if the proposed ordinance represents more than the sentiments of the three or four men responsible for it. The Bicycling World "refuses to believe that the majority of cyclists are in accord with it," and adds that L. A. W. officials "should be engaged in better business," a view that will be quite generally shared, Bicyclists having been through the mill should be possessed of that fellow feeling that makes man wondrous kind and we doubt not that most of them are possessed of it

There are no weightier reasons why such impositions as those proposed should be brought to bear against automobilists than against cyclists, equestrians or carriage or wagon drivers. The incompetent rider or driver is as much a menace to the public as the incompetent chauffeur and with motor vehicles selling and renting at their present prices, the incompetent chauffeur is not numerous or likely to become numerous. Few men will drive or care to drive or permit their expensive cars to be driven when requisite skill is lacking. On the other hand, any fool with a few dimes in his pocket can hire either horse or bicycle at his pleasure. To maintain that one class shall be examined and tagged and have its rights to the use of the public highways revoked under any conditions while all other classes are subject only to common law and conditions is abhorrent in a land in which all men are legally held to be equal and in which free institutions rule.

We do not take the L. A. W. proposals too seriously. To us, the most surprising feature is that even qualifiedly they have received the sanction of several automobilists of repute. Unless grounded on knowledge that the examining-licensing system is in vogue abroad, their position is almost inexplicible. But there are so many other laws and institutions across the water that are foreign and opposed to American ideas and practices that the reason is not a valid one.

We suspect that the real reason is that

which apparently prevails throughout what may be termed automobile officialdom, i. e., that a policy of no opposition and graceful submission is most expedient.

The L. A. W. proposal is a fruit of this policy. Were it the only one we would consider it unworthy of remark. But it is merely one of a long series. Automobilists are the victims of a few fools and sensational journalism and however deep it may be "rubbed in," to employ an expressive vulgarism, the victims supinely submit. The result is that they are baited and made game of by every city council, country constable or village board of trustees that may be seized with the desire. Flagrantly unconstitutional ordinances are being piled up and arrests made that are travesties on justices and are so rendolent of unfair and unjust discriminations as too smell to heaven.

The desire to "conserve the safety of the public" and to "protect the highways" exists only so far as it applies to automobilists. Stop-watches, barriers, registration fees, licenses and all the other what-not are for no other class. Cyclists, horsemen and all else may violate the laws-and do violate them-with impunity and without molestation. The "authorities" and law makers give them no concern. The sensational press has made the automobile loom so large and so vicious as to blind them to every other form of road user, and if the resulting discrimination is not what the law defines as oppression we cannot imagine what the term conveys.

In the ranks of the several organizations formed for the promotion and protection of the interests of automobilists there should be enough wealth and manhood to not only to protest but to oppose—and vigerously oppose—the intolerable conditions that prevail in so many parts of this country. A few measured courses and a few stopwatches held on cyclists and horsemen will speedily disclose the discrimination and oppression that exists, and give ground for action against those responsible; and the pressing of such action to conviction will result in a return of public sanity and in the relief of the intolerable and harrassing con-

ditions to which all who use motor vehicles are subjected.

Laws are made to be enforced without fear or favor, and they should be so enforced. As they now apply to the highways they are enforced only against automobilists. It is time the latter ceased baring their necks. It is time they stiffened their backbones and issued their "declaration of independence," shouldered their arms, and fought back.

Even the humble worm is known to turn when trod upon. It would seem that automobilists should not be lacking the spirit and courage of the worm.

# Some Storage Station Troubles.

That automobile owners occasionally have peculiar notions of a storage station is the impression one gathers who gives the subject some attention and study. They look upon it as a kind of philanthropic institution where, in return for the privilege of keeping their vehicles, the storage place will provide them with tools and the services of an expert to diagnose gratis any trouble they may have with them and give them trained mechanics at nothing per hour to execute their repairs. At times they are most innocently oblivious of the fact that there are such items as rent, light, managers and assistants to be paid for by the proprietors.

A case in point recently came to the attention of a representative of The Motor World while in a small storage place uptown. The owner of a light vehicle had had some trouble while out for a ride, and ran the machine into the nearest storage station, the place in question. Shortly after he offered the use of the vehicle to a friend who was supposed to know something about "troubles," provided the friend would put right the slight defect. Calling to look over affairs it was found that the only thing needed was to drive a pin back into place that was only to be gotten at with a long, flat piece of metal to act as a ram between the spokes of one of the rear wheels.

Calmly walking over to a nearby bench and picking up a hammer, then noting on the floor just the piece of flat metal needed to complete the job, the friend proceeded to hammer away. The pin didn't move with as much despatch as anticipated, so a little more force was put into the blows. The first gentle taps had attracted no particular attention, but the more savage affairs had the effect of bringing the manager onto the scene. Without a word he took the flat piece of metal out of the hands of the self-constituted assistant and walked away. Sheepishly inquiring why he had been disturbed in his "friendly" repairs, the latter was informed, among other things, that he had been using the handle of a \$45 jack as a battering ram.

Coming back to general conditions, the question of charges for repairs is with some vehicle owners a burning one. Generally speaking, the amount of grumbling which the unlucky repairer has to submit to is in inverse ratio to the mechanical knowledge of the owner of the automobile. The tyro examines his bill and pounces at once on an item such as "workman's time at 50 cents per hour," protests that such a charge is monstrous and demands to be told why he is charged 50 cents per hour for the time of a man who is paid \$15 or \$18 a week.

In vain it is pointed out to him that tools cost money, or that rent has to be paid. He settles his account with ill grace, is a much aggrieved person and perhaps takes his next repair to a cheap concern, only to emerge from their hands a sadder if not a wiser man, with the experience that repairs poorly done are dear at any price. For the guidance of those who may not be able to discriminate, and in the absence of recommendations from experienced friends, or those who are having their first experience, it should be pointed out that if the agency from which the vehicle was purchased is too far removed in time of trouble, then repairs should only be entrusted to such concerns as show on the face of conditions that they are responsible or registered,

### " Win, Tie or Wrangle."

While the perfect performance of the White steam carriage in the British reliability test is but a duplicate of what it has repeatedly accomplished on its native roads, it must nevertheless prove of gratification to all Americans; it reflects credit on the entire American industry.

With "win, tie or wrangle" as the unwritten rule that governs English sport so far as foreign competitors are concerned, it is not strange that a protest should have been forthcoming. It is based on such flimsy grounds—absence of mudguards and double brakes—that whatever judgment may be finally rendered cannot affect the merit of the performance itself. From this distance it would appear that it was the promoters'

duty to ascertain that the competing vehicles rulfilled requirements before permitting them to start—a point which the promoters of the approaching American test may well take to heart. It will avoid unpleasant and undesirable after effects.

Whatever the English decision, however, and without desire to indulge in "puffery," it cannot alter the facts that the White carriage is a credit to the country of its source, and that it was no small factor in rescuing steam power from the ditch and rehabilitating it in the good graces of both trade and public. Its striking public performances have been of definct benefit to steam carriages generally, as we believe few will dispute.

Properly made, the objections to high speed engines are not borne out in practice. We have only to turn to the tricycle engines which were made in the beginning, and before there was anything like the present experience available. Everyone prophesied they would knock themselves to pieces in six months, and yet we find them, after six years of wear, still running, air cooled as they are, and without the intervention of a clutch between them and their load. With a slow speed engine, tricycles would not have been rideable.

President Shattuck of the Automobile Club of America may not be the most likable man in the world, but opposition to his reelection should not be viewed seriously while it consists merely of an anonymous letter made public through the medium of an individual whose membership in the organization was terminated abruptly by the Shattuck administration.

According to a cable from Paris, Charles M. Schwab, who is now there, "drives an automobile of his own design, which he occasionally lends to the Grand Duke Alexis." Of his own design! And for many months the lay press has told us of the fabulous sums which Mr. Schwab paid and intended to pay for the productions of the French factories!

These are great days for the lawyer in search of advertising and the constable who seeks notoriety. Never before was it obtainable so cheaply. The one need but frame an anti-automobile ordinance, the other announce his intention of placing an obstruction in the road to halt the "ripsnorting devils."





Would-be progressive people often forget that a coal cart makes more noise than a Canstatt racer.

An expert automobilist is one who is able to impress people with their ignorance of the subject of mechanical traction.

Some men are born liars, some by dint of practice become fairly expert liars, and some write automobile literature for the sensational press.

\* \* \*

A man in search of the perfect motor might hope to acquire the wisdom of the serpent if, like the serpent, he had no legs to be pulled. Think this over!

Reading the editorial columns of the daily papers nowadays has convinced me that when it comes to the automobile editors almost invariably do wrong when they do write.

\* \* \*

Persistent effort reaps the golden harvest. He who battles longest and strongest gathers most into his garner. The pioneers in the manufacture of improved vehicles will be wealthy examples of this in a few years.

\* \* \*

From the day of Adam, sparking has been the cause of troubles without end. The coming of the automobile has added a new meaning to the old complaint and made of it a greater trouble-causer than it ever was since Adam's day.

Just so long as narrow, metal-tired vehicles are allowed to use city pavements, clean and well kept thoroughfares will be out of the question, no matter how much money and care is expended on new pavements and repairs. Not even the licensing, harrassing or abuse of automobiles will alter these facts.

"Give a dog a bad name," etc. Among the amusements I recently saw advertised for those who give up five cents for a trolley car ride to a "park" in the suburbs of Evansville, Ind., were "a number of automobile pictures showing accidents which might happen." There's education for you! Not content with burdening the automobile with all sorts of alleged terrors and crimes, we are now being treated by our friends, the trolley car barons, with moving pictures of accidents which "might happen," bless you!

In every corner of this broad land there is some unknown genius studying over the problem of the motor and its application to carriage propulsion. One does not have to be

possessed of a prophetic vision to foresee what will be the result of all this. The self-propelled vehicle of the near future is going to be one by comparison with which the finest automobile of to-day will be as far outclassed as an oxcart is by a locomotive. And the best of it all is none of us will have to live to be as old as Methuselah was to see this improvement.

When a really good thing stares him in the face, even the motorman of a trolley car, conservative though he is, may be safely counted upon to see it. While the gong clanger has not heretofore regarded the automobilist with any too friendly an eye, he has become convinced that the man with a motor vehicle is worthy of imitation by the motorman in at least one thing. Hence you see the goggles and mask of the chauffeur becoming more and more common on the faces of those whose bread and butter is born of working the brake and power switch on the front platform of a street car.

. . .

The man who can work the press and who promises to get you a lot of free advertising in the papers at no expense-except his remuneration-has made his appearance in automobiling. I am sorry to see that he has met with an enthusiastic reception by certain people in the trade; later on they will be like I am now-sorrw! Remember what Lincoln might have said had he been called upon to pass an opinion upon this case: You can fool all the papers some times; some of the papers all the time, but not for any great period or large profit can you fool all the papers all the times." Those who listen to the blandishments of the press worker will have this taught them shortly in a very thorough but rather expensive fashion.

It cannot too early in his career be learned by the automobile manufacturer that it is the momentum of advertising that carries a business along. It is like the motive power which carries along the vehicle he builds. Shut off the power and the vehicle will move on for some distance without any perceptible diminution of speed. Gradually and surely, however, it comes to a full stop. It is the same way with advertising. The only way to keep the business vehicle going, no matter whether the driver is an individual or a corporation, is to keep up power. All this and a lot more anent the belief of some that in the days of success advertising is only an expensive luxury and not the absolute necessity that it really is.

Among the many other serious charges the gentle Long Island ruralist has meekly laid at the door of the automobile is that of being a most complete milk preventer. According to the accusers, ever since the owners of high powered automobiles have taken to getting all the speed possible out of them when proceeding along Long Island highways, the cows have forced their owners to do double duty at the pump, so as to keep the supply of milk up to standard, even if its quality

was sacrificed: To the farmers the action of the cows is a mystery; to me it is as plain as A, B, C. What self-respecting cow could be expected to tend to her legitimate business when all of her time is taken up with seeking safety from flying vehicles, the drivers of which are clad from head to foot in skins taken from dead and gone members of the cow family? Even the milk of human kindness would diminish under such trying conditions.

There are some men who always know about things; they have a power of judgment that amounts to genius. They discern truth unerringly. They know what is wrong and what is right in a motor or its employment, and they know it at the outset without waiting for any one to tell them. They range themselves not with confidence, but with knowledge; and, however the clouds may lower, they are not disturbed. Indeed, they rather like the storm, for they know when the end will be. They are more powerful than other men because they are unhampered by doubts. They don't doubt, they know, and men follow them, as they always will. Everybody admires the man that knows an automobile and is sure about it. Such automobilists are not as common as one would have them. I have often wished I was one of these men, to whom the mastery of everything was easy, but wishing is as near as I will ever come to being one, I am afraid.

\* \* \*

You wouldn't think that really and seriously there was yet another automobile publication being planned for New-Yorkers, now, would you? To most people it would seem as though there was no "aching void" in the field of automobile literature which just at this time needed filling, but there is. The "h'upper suckles" are wailing and crying for a periodical intended solely for their use-at least, that is the belief of those planning the new periodical-and all the "h'upper suckles" ask is that their paper be made sufficiently expensive to meet their requirements and to at the same time place it beyond the reach of the common herd. The plans which are now under way, as told to me by the chief planner last week, call for a monthly publication, as a starter, to be sold only by subscription at \$100 per annum. Surely that ought to be gilt-edged enough for any circle, no matter how up or even upper it might be! Furthermore, the planner said no advertisements would be solicited, though he thought that later, if the advertisers came to the paper and properly plead for representation upon some of the most obscure pages thereof, perhaps they might be allowed to do so, but only at a price in proportion to the subscription one. Of course, you won't believe all of this, but it is really a fact, just the same. By its being a fact I mean an educated man, holding a responsible position, while in apparently his sober senses, outlined the plans to me as I have given them above not more than THE COMMENTATOR. ten davs ago.

# **VICIONS PHILANTHROPY**

# Queer Methods Employed by Man With a Grievance—Scatters Libels Broadcast.

The self styled philanthropist has finally made his appearance in the automobile world. Philanthropists of the sort are usually odd characters and the automobile article is no exception to the rule. He made himself known in the advertising columns of a New York newspaper, in this form:

"Those contemplating purchasing Automobile, who would avoid being swindled, can get timely warnings and benefit of my experience free; motives purely philanthropic, to prevent others from being victimized."

He gave his name and address, the latter being in the financial district.

The unusual nature of the advertsement naturally aroused curiosity and the resulting inquiry brought the "philanthropic" information on a long, typewrtten and mimeographed sheet. It proves to be a particularly vicious attack on several fairly well known concerns, whose names are mentioned, and who, if the desire obtains, should have little trouble in making the "philanthropist" pay dearly for his amusement. As an example of the manner in which, to merely gratify personal spite, a man with a grievance can "lose his head," and while confessing his own incompetence, make an unmitigated ass of himself, the "philanthropist's" splutter is well worth reading. Here it is:

"In the past six months I have gained considerable experience about 'Autos,' at the cost of some money and a vast deal of worry; and as it is a fad of mine to guard other peple against being victimized (so far as possible), I am going to give you the benefit of of my experience, together with the following facts about the Auto game. Nine persons out of ten who own an auto will tell you, if they speak the truth, that the machine causes them more mental anxiety and worry than a load of stocks in a declining market. A machine may run all right when it is new, but just as soon as it gets a little worn, in a couple of months, the trouble starts. Unless you are a good mechanic it is quite impossible to keep the machine in order. The auto stations will 'soak' you for even trivial repairs. They are obliged to rob patrons or they could not live.

"My first experience was with a second hand ——. That was unsatisfactory, but nothing to what followed. I bought a big red —— touring car from a concern called the 'Exchange,' under a year's guarantee (which guarantee turned out to be worthless), and engaged what was supposed to be a skilled chauffeur to look after it. Even the chauffer could never keep the machine in order. Finally, on taking it to pieces, we discovered that the motor was second hand and the cracks carefully chinked up and covered with paint. The concern who sold

it to me told my chauffer that I must be a fool to think any auto could be kept in good order for less than \$200 to \$250 per month. I next tried to get on without a chauffer, with about the same results. Have succeeded in keeping the repair bill below \$100 per month, but the machine has not been in good enough shape to use more than two or three times per week at most. There are perhaps some honest people in the auto business, but I have not yet discovered them. As an example, we broke the glass face of the auto lamp. The manufacturers, R- Manufacturing Company, would not give a fixed price for putting in a new glass, but thought the charge would not be more than \$3 !!! That seemed pretty stiff, but on going after the lamp we were soaked for \$5.30, and found the next day that they had removed a valve screw to give them a chance to soak us again. And that is just a fair sample of how everyone who owns an auto is considered a fair mark to be shot at.

"Much annoyance may be saved by employing a competent chauffer, but the chauffers I have come in contact with are a similar class of persons to the roller skating rink professors of fifteen years ago—N. G. The chauffer schemes how to skin you and "borrows" your machine to take out his friends while you are at business. My chauffer, moreover, managed to run over a child.

"My auto is as good now as the day I bought it, but I would be delighted to find some 'sucker' who would take it off my hands at half price. And I am no exception to nearly all auto owners, except, of course, millionaires to whom money is no object. If, however, you must have a machine, an electric will give you the least bother."

### Studebakers New Quarters.

T. Wells Goodridge, manager of the automobile department of the Studebaker Bros. Manufacturing Company, South Bend, Ind., was a visitor to New York this week. Mr. Goodridge reports that the sale of the Studebaker electric vehicle is progressing most satisfactorily, and that the vehicles are giving excellent results to the users. On January 1 the Studebaker Bros. Manufacturing Company will remove to their new carriage and automobile repository on Long Acre Square, in this city. The building will be ten stories in height and one of the finest equipped repositories in the United States.

### Some Speed Case Descrepancies.

One peculiar thing brought out in the testimony of the witnesses for the people in the Owen case, was that they all said the automobile had two seats. As a matter of fact, it only had one seat; but still the young prosecutor told the jurymen that the witnesses were all reliable men. William W. Cameron, who held the watch at the finishing stake, said that if he had a horse which could not travel faster than 1.15 for the quarter, "he would turn him out." He also said that he used a borrowed stop-watch and had no previous experience in timng.

## TESTING THE TIRES

Three Thousand Miles to be Ridden Under Rules Here Given.

In addition to the other features of testing there was also run the first 650 miles of a 3,000 mile tire trial, which is to continue through the month of September. The only tires bein gused that are known in this country are Goodyear, one set, and Dunlop, four sets. The reports so far received are conflicting in the number of marks lost for the first week.

The rules under which the scoring will be carried on are as follows:

The tires which are entered for the 3,000 miles test must fulfil the following conditions:

- (a.) The tires shall be the ordinary tires sold to the public, and shall be selected by a representative from the Judges' Committee out of stock.
- (b.) Six outer covers shall be selected, of which four shall run and two be in reserve in case of a tire being destroyed by a bad cut, etc.
- (c.) At the end of the trial the tires shall become the property of the club, in order that they may be cut for examination.
- (d.) Before the trial a section of a similar tire shall be supplied by the maker to the committee.

The tires are divided into sections, being classified as follows:

- I. Pneumatic tires. The sectional diameter of the tires shall be such as the maker may consider suitable for a car weighing, with load, not less than 3,000 pounds.
- II. Pneumatic tires. For tires of not more than 90 mm, by about 870 mm, fitted to cars weighing, with load, not less than 2,000 pounds.
- III. Experimental tires, i. e., tires not yet on the market. In this case, it is unnecessary that there should be stock of tires from which the tires for trial may be selected.
- IV. Hollow tires, i. e., those not inflated.
- V. Solid rubber tires.

In giving marks and judging the tires, the following points will be observed:

a) One mark will be deducted for every minute spent in inflating or repairing a tire, whether n the garage or on the road; (b) the price of tires; (c) loss in weight; and (d) condition of tires, as shown by periodical examinations and by photographs taken during the trials and by examination at the end.

### Skinner in Nova Scotia.

Kenneth Skinner returned to Boston last Saturday from a trip through the Annapolis Valley in Nova Scotia with a new tonneau De Dion-Bouton motorette. He reports the roads sandy and rutty as a rule, with good stretches between Yarmouth and Annapolis. On one run he covered 110 miles in four and one-half hours.







# One More World's Record

for the

White Steam Carriage,

# Five Miles 6 m., 43 s.

at Cleveland, September 16th.

At the same meet, the WHITE won every event to which it was eligible.

Those performances simply proved anew its

# Speed.

Every endurance run ever held has demonstrated its

# Reliability

and the consumption tests its

# Economy.

No steam carriage built has approached its 100-mile non-stop record:

6 Gallons Water, 5% Gallons Gasolene.

CATALOG ON APPLICATION.

# White Sewing Machine Company,

(Automobile Dep't)

Cleveland. Ohio.

2 Union Square, New York, N. Y. 609 Main Street, Buffair, N. Y. 509 Tremont Street, Boston, Mass.

300 Post Street, San Francisco, Cal.
300 Rose Bidg, Cleveland, Ohio,





## STICKLER FOR PROPRIETIES

# Gasolene Motors Want but Little, but Want That Little Well.

No matter how carefully a gasolene motor may be made, it cannot operate successfully unless properly cared for, any more than a horse could work without food and other attentions.

The gasolene motor is a stickler for the proprieties. It demands that it be attended to at regular intervals. If, having been properly lubricated, a motor fails to work, the cause may probably be found in one of the following reasons: The gasolene pipe, or carburettor, may be partly filled with dirt; the gasolene of low quality; the batteries weak; the battery wires broken or short circuited; carbon may have formed on the platinum points of the plug; the insulation may be short circuited; the inlet or exhaust valves leaky, or the piston rings weak or worn out.

In a general way the following rules may be followed with success. If the precautions advised fail to make the motor operate successfully there must be something unusual the matter, and attention should be given to the car by a well posted practical automobile repairer, unless one is mechanic enough one's self to locate and remedy the trouble. Before attempting to start see that the tank is full of good gasolene. Don't think you know it, but know it by testing. See that the gas reaches the engine. Notice if the valves work freely. Push them in with the finger; if sluggish, or gummed up, clean with gasolene.

Test the plug; do not do this by detaching the secondary wire from the plug and endeavoring to get a spark between it and the engine. If you do there is liability of short circuiting the secondary winding of the induction coil, should the break be too long for the current to jump from the wire to the engine, and in that event the snap or jump will take place inside the coil. While a few such occurrences might not injure the coil. a continuance of this method of testing will without fail form a carbonized path between or through the insulation in the coil, and thereby produce a lead for the current having less resistance than the space between the two points, and thereby allow the current to follow that lead instead of jumping between the points. This is what is termed a short circuit in the coil, and is a common occurrence in the best of them where such carelessness in handling is indulged in.

Another reason for not using this method of testing is the example it sets others, for while the well informed motorist might successfully make the test, one less familiar with the results likely to follow might completely ruin a good and costly coil, and then blanes the coil for giving out. An ounce of prevention is worth pounds of cure.

A far safer and more satisfactory manner of making such a test is to take the plug out, lay it on the engine, and then, by breaking the primary circuit in the regular manner, see whether there is a spark. If no spark takes place, the cause may be that the switch is off, the batteries exhausted, wire broken loose from the terminal, carbon formed on the plug, or dirt or oil has prevented the primary circuit from being formed through the circuit breaker. If the switch is off, throw it on; if the batteries are exhausted (always carry an instrument for testing purposes), replace them; go over the wires and see that no connections are loose. these precautions have been taken make another test, and a spark will be obtained at the break, unless the wires have been incorrectly connected. If this has occurred remedy the mistake and test again, until you are sure the ignition apparatus is right. Then replace plug and connect the secondary or plug wires securely.

Now proceed to try the motor again, and if it then fails to run the cause may be lack of or too much gasolene, and the carburetter should be given attention and careful regulation until a combustible charge is produced. The atmospheric changes must be taken into consideration in order to derive the best results. In cold weather gasolene does not vaporize as readily as in warmer weather; therefore it is a good plan to draw the air from about the cylinder. This will insure a combustible mixture. Too heavy a charge of gasolene will make the force of the explosion light by reason of the combustion taking place slowly, while too light a mixture will make the force of the explosion light because the charge contains insufficient heat units. As there is no exact method of ascertaining just what proportions of vapor and air are being used, the motorist is left to learn at what point the motor will give the best results, and regulate it accordingly, taking note each time of atmospheric conditions for future reference.

If the motor is water jacketed, see that the water is always free to circulate before starting; also that the tank is full, otherwise a hot cylinder is likely to result and stop the engine by reason of the cylinder oil burning, thereby causing the piston to seize. Remedy this by allowing the motor to cool, then allow water to run in slowly until the water jacket is full. Then lubricate well and turn the flywheel around a few times to be sure the lubrication is thoroughly accomplished. This cause of stoppage is liable to clog the inlet and exhaust valve passages or seats with burned oil so that they will not seat regularly, and to cover the end of the sparking plug to such an extent as to prevent the spark from taking proper effect, causing it to jump up at other points where it will not generate sufficient heat to start combustion.

Back firing is caused in most cases by the spark plug being timed too early, or having become out of adjustment, or by the cylinder becoming hot, which could cause the mixture to explode when the compression reached a certain point on the compression stroke.

Remedy this by regulating the timing device, by readjusting it, or by allowing the cylinder to cool.

If the engine pounds when running, there is a loose bearing. Make the adjustment as soon as possible, to avoid unnecessary wear and possible damage by reason of the parts coming apart. If it pounds when starting it is most likely because the spark is timed to take place when the compression is too high. Remedy this by altering the time of the spark so that it takes place when the compression is lessening. This will reduce the force of the combustion and thereby enable the vehicle to get under headway at more even speed, and without unnecessary vibration. This applies particularly to motor cycles. If the explosion lack power and the remedies suggested above do not prove efdective, the piston rings may need replacing, more lubricating oil may be needed, or the valves may ned cleaning or replacing. If smoke is emitted from the exhaust it may be because too much cylinder oil is being used or because the mixture is too heavy. See to both these features and regulate until smoke fails to show. It will be almost impossible to produce a perfectly clear exhaust, however, hence a slightly bluish vapor need not cause worry. Finally, the following suggestions may usefully be learnt by heart by those who have lately joined the ranks of the ever increasing army of motorists:

Don't use cheap cylinder oil or steam engine oil in your motor.

Don't fail to oil your engine every time you run it.

Don't fail to see that the water is flowing properly when the engine is running.

Don't allow water to remain in the water jacket around the cylinder while the engine is idle on a cold day.

Don't allow your carburetter to get filled with dirt.

Don't let your batteries or induction coil get damp.

Don't fail to examine the engine occasionally

Dont't make any changes on the engine or allow a so-called expert to tamper with it.

Don't blame the engine at once if it does not run; look for the trouble—it may be your fault.

Don't look for petrol leaks with a lighted lamp or match.

Remember that every manufacturer tests by indicator or brake every engine before dispatch, and each moving part is carefully adjusted and set. Leave the engine alone; never attempt to take the engine apart until you have run it awhile and have become familiar with it, unless absolutely necessary. Never take it apart from curiosity. When taking an engine apart be careful and note the marks; if there are none, make them, so that the pieces may be returned to their former positions.

It should be the pride of every motorist to keep his engine clean. All valves on the engine should be reground with flour of emery if they show the slightest wear. Care-



# WINTON RECORDS LOWERED-

by

a WINTON, of course,

and the Winton "Bullet" at that.

# Ten Miles in 10 minutes, 50 seconds

(Former record, 11:09)

by ALEXANDER WINTON at

# CLEVELAND, SEPTEMBER 16, 1902.

ALL COMPETITORS DISTANCED.

The Winten "Pup," driven by C. B. Shanks, likewise upheld the Winton reputation, placing the five miles open for vehicles under 2000 pounds to its credit.

if you would learn the story of WHY WINTONS WIN, write us.

# THE WINTON MOTOR CARRIAGE CO.,

CLEVELAND, U. S. A.

NEW YORK.

CHICAGO.

BOSTON.

PHILADELPHIA.

fuily wipe them off before replacing. Examine all springs; see if they are free from rust and gummed oil; occasionally look after the batteries. See that the exhaust and inlet passages are kept clean. Remember that clean. Remember that gasolene fires are easily extinguished with sand or earth. If in an inclosed space it is more easily extinguished by ammonia, which should be hung up in several bottles by cords that will burn, and where the bottles may be broken by the 'fail.

### Saved Them Sentences.

One of Buffalo's police court justices, having practiced the handling of his vehicle to that point where he felt himself confident of his ability to do away with the service of a driver, was recently hurrying to court when he was confronted by a dilemma in the shape of a young woman on a bicycle. She appeared to be as undecided as the justice as to who had the right of way. Determined at any cost to avoid a collision the justice gave the steering crank a quick turn to the right and the machine careened over on to the sidewalk, narrowly missed a tree, and came to a stop at a fence.

But little damage was done, and the judge proceeded on his way rejoicing. He was so lelated at his escape that he discharged some twenty or more prisoners who were awaiting his disposition of their cases. One old offender, who knew of the justice's little mishap, was heard to express the hope that he would use an automobile every morning with like results.

### Will Stand Trial

There is to be a test made in Newport, R. I., of the law which forbids automobile drivers to exceed a certain speed while running machines on the public highway. An appeal has been taken by a chauffeur for W. Watts Sherman. The driver, to the surprise of every one, broke all precedents, and refused to plead guilty.

Heretofore, Newport owners and chauffeurs alike have pleaded guilty, and saved the trouble of a trial, and no expert evidence has been required to show that the legal speed was exceeded. Now some one will have to appear and tell what he knows about speed.

William K. Vanderbilt, jr., has not gone to New York, though it was reported that he would shake the dust of Newport from his feet, in view of the vigilance of the police in arresting him for overspeeding his automobile. Mr. Sherman was called into court with Vanderbilt and fined about a week ago.

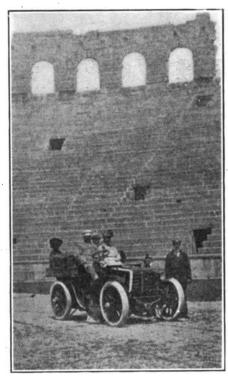
### No Jail Penalty.

Eight miles an hour is the maximum speed now permitted in Atlantic City, N. J. Although an effort was made to provide for imprisonment for any violation, it was finally decided instead to exact the sum of \$25 from any operator who was caught travelling faster than the legal rate. The new regulation requires motorists to slow down when passing restless horses.

### Nero Knew Not.

One of the most persistent of long distance tourists is Charles J. Glidden, of Lowell, Mass., a member of the Automobile Club of America, the Massachusetts Automobile Club and other organizations.

Last year Mr. Glidden rode several thousand miles in Europe, and was so much pleased with his experience that he arranged to repeat it this year on a more extensive scale. He had constructed for him, to his own designs, a Napier car, with tonneau body. Sailing early in the summer, he re-



IN ROME'S COLISEUM.

ceived the car at the works in England and started on his long journey.

The greater portion of Germany, France and Italy has already been covered by the tourists.

While at Rome, after completing 3,500 miles, he obtained the consent of the authorities for his car to be photographed in the arena of the Coliseum. In the front Mr. and Mrs. Glidden are seated, while at the back are Mr. and Mrs. Dudley E. Waters, of Grand Rapids, Mich.

## Lost; One Queen.

It is not often that a queen is lost, but this has just happened to the queen mother of Italy. Queen Margherita was in the beginning much against the motor car, and would not hear of entering one, it is said, and—more likely—that it was a danger to the lives of others. One day, how ver, she allowed herself to be persuaded by her son to go for a spin with him, and has since caught the fever in its worst form.

The other day she, the chauffeur, and a lady and gentleman in waiting started early in the morning, intending to return for late lunch. One, two, three passed with no sign

of them; four and five with still complete silence; until those in the palace could not contain their anxiety and determined to take measures.

Then followed a wild confusion of ringing of telephones, tramping of flying horses, dispatch of servants, carbineers and police agents in every direction. At first nothing could be heard of the lost motor car, until a carbineer, about 7 p. m., came upon a car which he thought he knew, in a tiny village, and which investigation showed to be the one he was in search of. A little further on he found a tiny inn, and looking through the vines into the garden saw her majesty and the others, seated tranquilly at a table having an al fresco meal, which appeared to be much to their taste, while the excited peasant landlady hovered in the background, her knees showing an inclination to kneel every time the queen looked at her.

It seems that the car had broken down some little distance from the village, and could not be mended quickly with the means at hand. Telephones were unknown there, so the party had philosophically made the best of it, the Queen exclaiming when she left: "I never dreamed how good polenta cakes could be!" They all arrived at the palace about midnight.

### Wonders of French Insurance.

The insurance of automobiles in France is the most difficult, costly and unsatisfactory affair, as there are so many classes of risks to be taken into consideration, and an economical combined policy does not exist. In the case of fire alone, you have to insure your car against fire while it is standing in the garage, and again whilst it is on the road; then you have to insure your stable and any other stable where it may happen to be, and after that comes the risk of the building adjoining your stable or the building adjoining where your car happens to be for the night, and so forth.

When it comes to insurance against accident, the risks to be guarded against are innumerable, for, under the new laws in France, it costs about £1,000 if your mechanician is injured, whereas if you injure a millionaire your risk increases in proportion to his wealth and station. The Association Générale Automobile is studying the question with the object of bringing out a mutual insurance scheme, which will be a great all-vantage to all its members.

# Though Sleeping Car Line to Grand Rapids, Mich.

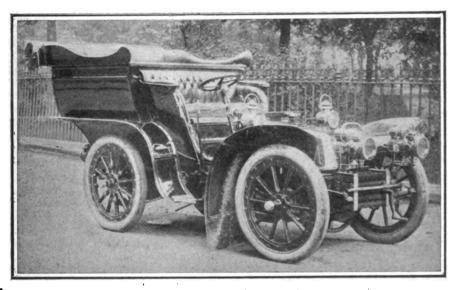
A Pullman Sleeping Car of latest construction is now attached to New York Central train leaving Grand Central Station at 4:00 p. m., daily, running through over the Michigan Central Station, arriving at Grand Rapids at 12:55 p. m., next day, connecting in Union Station for all points in Western Michigan. For information and sleeping car reservations inquire of New York Central Agents.

## IMPROVING THE TONNEAU

# Two Examples of Bettering its Appearance and Effectiveness.

Now that the tonneau body vehicle has reached a point where it can be said to have fairly established a type, it is to be expected that refinements and detail of the type will have attention at the hands of

four people, but its merit lies in the mobility of the application. As illustrated, the middle seat faces the rear, and is dis-a-dos relative to the front, as it would be used for a party journey. For a sightseeing trip the middle seat can be reversed, so that all six on board can face forward. A further flexibility lies in the fact that the middle seat can be entirely removed, and the centre body used for the storing of ample baggage for the most extensive tours.



WITH REAR SEATS RAISED.

those capable of doing more than copying. An example of this spirit is shown in both a French and an English vehicle, of late construction, the former a Mors, the latter a Sterling.

In each instance, as will be readily noted from the illustrations in this issue, the improvement aimed for can be truly called such; at the same time, they are so entirely dissimilar that a choice between the two would have to be based entirely on local conditions,

Perhaps the one objection that has been urged against the tonneau as generally applled, has been that the front view of the rear occupants has been cut off too much to give the fullest pleasure possible when touring. This, of course, came from the parallel position of the front and back seats, a position which also caught more or less of the dust of the front wheels. In the Mors vehicle, illustrated, these two matters have evidently been the points taken into consideration, the rear seats setting well above that of the driver. The general lines are also worthy of note, as they certainly represent good proportions, and have some relation to general effect.

Roominess in the tonneau and ability to take on more than two or to give room for baggage, while touring, has not always distinguished its makeup. In some instances the attempt to overcome these limitations has not been a noteworthy success. In the Stirling car the tonneau has been built for

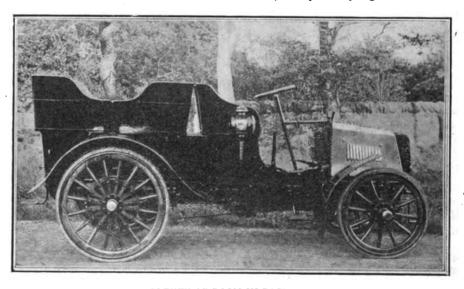
# **PASSED OVER HIS VETO**

# Notwithstanding Mayor's Sensible Ruling Board of Works Insists.

When Mayor Seymour, of Newark, N. J., showed that he was not to be carried off his feet by the present desire to regulate the speed of motor vehicles irrespective of good law and good sense, he very naturally came in for worthy commendation.

The ordinance provided for a speed of eight miles an hour in the city and four miles around corners, and with his veto he gave it as his opinion that the matter showed unjust discrimination, and that if it was to protect citizens in the use of streets against fast driving, it should include every kind of conveyance,, such as horse drawn vehicles, electric cars, etc., the penalties should be coequal and without discrimination made against one class of citizens in favor of another.

Despite this sensible opinion the ordinance, which in addition to limiting the speed, requires every owner to register his name with the number of his automobile, in the county clerk's office, was passed by the board of works last Thursday afternoon over the mayor's veto. The vote was taken after City Counsel Price had rendered an opinion in which he held that the ordinance, as drawn, was perfectly legal.



PLENTY OF ROOM IN BACK.

### White's "Catch On."

That White steam carriages are "catching on" abroad as well as at home is attested by a shipment of fifteen Whites to Johannesburg, South Africa, last week. It is safe to predict that more will follow.

Winthrop E. Scarritt, who, by the purchase of a White steamer, now owns his sixteenth automobile, declares his latest purchase by far the best of the lot, which includes all types, both foreign and domestic. Geo. Chamberlain, of the A. C. A., is another White enthusiast.

Counsel Price, in giving his opinion, said that the points objected to by the mayor had been carefully considered before the ordinance had been introduced. He also said that it had been read to the board of free-holders and that body had approved it.

"Regarding the first objection of the mayor's," Attorney Price continued, "in which he declared that fixing a rate especially for automobiles is an unjust discrimination between the different kinds of vehicles, I would say that is simply a matter of judgment between the members of the board and the mayor. If the members of the board

differ from the mayor in their opinion, there is no legal question involved.

"As for the mayor's second objection," the city counsel went on to say, "in which he declares that the board has not power to legislate for the county officials, I would say that in passing the ordinance the board did not seek to legislate for the county officials, but rather to exercise authority over the automobile owners. It was not deemed practical to have the automobile owners register in the office of the general superintendent of works, for in that case there would be more or less confusion. The owners then might have to register under a different number in East Orange, again in Orange and perhaps again with the clerks of all the townships. As long as it is practically impossible to drive an automobile within the city without passing on a county road, and as the road committee of the board of freeholders read the ordinance and agreed to its provisions, I deem it perfectly legal for the board to pass the ordinance as drawn up."

The fomal vote was then taken and the ordinance was passed unanimously.

### Sentence Deferred.

In the District Court, Newport, R. I., the case against Siegfried W. Bloom, automobile driver for W. Watts Sherman, charged with speeding an automobile in the public highways faster than the law allows, was heard before Judge Baker on Tuesday. The case has attracted considerable attention, as it was the only one of many brought against automobile drivers in Newport which has been contested.

The judge said that the evidence showed that some one had overspeeded Mr. Sherman's automobile, and while there was some doubt as to the identity of the driver, (Bloom's defense was an alibi), he would hold the defendant probably guilty. Sentence was deferred until Friday next, and the case will probably be taken on an appeal to a higher court.

# Less Gasolene and More Miles.

An automobilist relates that when he first got his car, a gallon of gasolene lasted only eight miles, while later on, after he had gained experience, it proved sufficient for about thirty miles. The explanation was to be found in the fact that he used too rich a mixture, and too much of it. This had the effect of fouling the valves, and so pitting them, which resulted in the loss of compression.

Motorists should always bear in mind that they should drive on the smallest quantity of mixture which will secure the necessary power, and also should be exceedingly careful to get the correct mixture, and, above all things, to avoid having it too rich; in other words, having too large a proportion of crude gas, as compared with air.

An English engineer gives it as his opinion that on a perfectly smooth road a steel tired vehicle can be run with less power than a pneumatic.

# INCREASED ROOM NEEDED

# Longer Wheel Bases on Latest Vehicles Raises a Problem.

One of the results of lengthening the wheel-base of automobiles, according to the latest ideas of builders, that seems to have been overlooked at first by some of the people interested, is the greater amount of room required for storage. The clubhouse of the Massachusetts Automobile Club is just now furnishing an example of the difference in amount of floor space needed for a given number of carriages of the latest style as compared with that for the carriages most in use when the clubhouse was built.

Like most of the smaller automobile storage floors, that of the club is arranged so that the vehicles stand backed against the wall on either side, with a broad aisle extending down the middle. When the house was planned, the vehicles then in vogue were seldom more than eight or nine feet long, over all; sometimes they were considerably less than that; and as the floor has a total width of about thirty-five feet, the double row of short carriages backed against the walls left what then seemed to be plenty of room in the middle of the floor. A carriage could be backed and turned there with comparatively little trouble.

Now it is different. Membership has been increasing in the club, more autos have come in, and this summer a number of members have changed their old vehicles for modern rigs, or have bought new. There are five or six Wintons, almost as many more big vehicles of other makes, and a high and heavily constructed steam touring car, all of which, added to the club equipment this summer, are eleven feet long, over all, instead of eight or nine. Take a double row of cars of this length and back them into their places against the walls of the club station, and the aisle left free in the middle is noticeably narrower, enough so, in fact, that much more care is necessary in navigating around from one berth to another, as required by washers and caretakers.

As a relief measure, the club officers have decided to have a turntable constructed in the middle of the floor, so that a carriage on being run in from the street may be stopped on this turntable, and turned around, ready for starting out on another trip or ready for backing into its berth, to the washing floor, or to the elevator.

It is expected that this device will go far to minimize the difficulty in handling carriages in a cramped space as well as to prevent the wear and tear on tires and steering mechanism occasioned by attempts to work around the long and heavy rigs by the laborious backing and starting process, with one man twisting the steering wheel and two others alternately pulling and pushing at the sides of the vehicle. The plans for

the turntable are now being drawn. It cannot be made flush with the concrete floor of the station, but will have to be slightly raised, with a slight incine to allow the rigs to enter or leave its platform easily.

### Tourists' Treasury Ruling.

For the information of automobilists, the Automobile Club of America last Thursday issued a concise statement of the Treasury Department rulings now in force relating to the importation and exportation of automobiles, the revised conditions having been the result of the efforts of the club and the American Automobile Association.

An owner desiring to take his American built machine abroad is instructed to obtain from the custom house at the point of departure an outward bound clearance. Before returning to this country he should obtain from the United States consul at the point of departure an inward bound clearance, coupled with a declaration made before the consul of the fact that the automobile was exported from the United States, and that it has not been advanced in value or improved in condition by any process of manufacture or other means. Failure to comply with these conditions render the automobile subject to the same duty as those of foreign build.

The regulation permitting the free entry of bicycles of tourists brought into this country for temporary use, not exceeding three months, has been extended so as to include automobiles brought by tourists from abroad for a stay of not exceding three months. In such cases formal entry is required, a careful examination and appraisment is made at the point of importation, and a bond satisfactory to the custom authorities, with penalty in double the estimated duties, must be given by the importer, providing for the due exportation of the automobiles covered within three months from the date thereof, when such bond shall become null and void; otherwise to remain in full force. American citizens travelling abroad are not regarded as tourists by this regulation, and its provisions do not apply to them.

### Says Auto Frightened Horse.

Suit has been brought at Rome, N. Y., for \$6,000 damages for an accident caused, it is alleged, by a horse becoming frightened by an automobile. Several weeks ago while Benjamin F. Chaplain, of Blackman's Corners, south of Rome, was leading his horse along the highway, the animal became frightened at the automobile being driven by Charles A. Lee, of Oneida. In his attempt to hold the horse and to keep it from running away Chaplain was thrown to the ground, breaking one of his hip bones.

The extent to which automobile touring has reached this fall is shown by the report from one small town in Massachusetts, where nine vehicles, holding in all twenty-five persons, passed through in one day.





The Johannesburg (So. Africa) Town Council is reported as wanting one hundred motor cars, each capable of holding twelve persons, for public street service.

Four steam vehicles in a five-mile race made up part of the programme of the Middlesex North Agricultural Society, held in Lowell, Mass., on September 20. The event was won by Edward Bascom in 11m. 20%s.

Prince Wells, of Louisville, Ky., for years prominent in the bicycle business in that city, has secured the agency in his section for the Rambler vehicle, made by the Thomas B. Jeffery Co., of Kenosha, Wis.

Willis Grant Murray, who has been the active manager of the Church Mfg. Co., Adrian, Mich., is no longer with the concern. The news is conveyed by a circular letter sent out by the company.

The Sandusky (Ohio) Automobile Manufacturing Company has taken out a permit from the city clerk's office for its new factory building. The structure is to be of brick, two stories high, 60x100 feet. The cost is given as \$7,000.

The Autocar has started a record of persons killed and injured by the uncontrollable horse in England. The first twelve days show 17 deaths and 143 injuries. The death table includes only those killed at the time of the accident, after fatalities not being counted.

With State aid there has been constructed in New Jersey since 1893 inclusive more than 850 miles of improved roads at a cost to the State of \$1,216,000, and at a total cost to State, county and property-owners of \$3,645,000, the State paying one-third of the money expended.

Of the first 255 miles travelled by the officials of the New York and Chicago Road Association in their automobile trip from this city to Chicago, they say that half the distance can be called good country roads, a quarter of it is being improved, and the other quarter is of the worst possible kind.

The Automobile Club of Hudson County, N. J., has elected the following officers: M. A. G. Evans, president; Dr. L. Bauman, vice-president; Frank Eveland, secretarytreasurer. The runs and tours committee is composed of G. H. Wilson, Dr. L. A. Opdyke, George E. Blakesley and E. V. Kiersledt.

The four suits for an aggregate of \$14,000 damages instituted on May 16 last against Willis S. Kilmer, of Binghampton, N. Y., for injuries caused by the collision of his automobile with a runabout, were entered "agreed and settled" in the Court of Common Pleas, having been compromised out of

For some time past the city of Pittsburg. Pa., has had the services of an automobile fire engine. It is evident that the experiment has proved a success, for a self-contained hose wagon has been ordered. These outfits are to be formed into one separate company and operated in the business part of the city.

For two years past the managers of the fali fair at Mineola, L. I., have refused automobiles admission to the grounds, those coming to see things in these "contraptions"

C. H. Minchin, who conducts the Blue Book station at Greenwich, Conn.-the only one in town-has so altered and rearranged his establishment that he now has a repair shop forty feet long and is in position to. handle automobile work of all kinds. Minchin is also preparing to market the Miner kerosene burner, and hopes to have it ready within two weeks.

A. M. T. Cunningham, the general manager of the Consolidated Telephone Company, has just arrived in this city from Clarksburg, W. Va. He made the trip from Clarksburg to this city in a Toledo runabout, covering the 685 miles comfortably in five days. Despite the fact that this trip is a particularly hard one on any kind of a vehicle, Mr. Cunningham was not delayed a moment by any sort of mishap to his vehicle.



ON THE WAY TO THE NEW FACTORY.

being obliged to leave their vehicles outside the gates. For the "good of the gate" the ruling has been changed and this year motorists will be admitted to the grounds in their vehicles.

Sir Thomas Lipton, who is almost as enthusiastic over the motor car as he is over yachting, is up for membership in the Automobile Club of Great Britain and Ireland. If the Gordon-Bennett trophy should ever be won by an American, Sir Thomas would doubtless have automobiles especially constructed to "lift the trophy."

According to her press agent, a public singer has left New York for San Francisco, via Larchmont and Boston, at which places she has engagements. From the Hub she will start west across New York State, going by easy stages. He naively adds "that she will stop at many points across the continent," but fails to state whether for singing or other things.

According to Wingate's Historical Handbook, as late even as 1800 only five residents of New York City could afford to keep a coach. One of the owners referred to his vehicle as a "leatner conveniency" as an apology for such worldly display.

So many nails are constantly found on the French roads, where sooner or later they are picked up by pneumatic tires, that it is obvious that most of them are placed there intentionally. The Touring Club of France evidently believes that this is the case, for the club is offering a reward of twenty francs for each information leading to a conviction for such offence.

## Recent Incorporations.

Albany, N. Y.-The Combination Tire Co., with \$100,000 capital. Directors: Thomas

with \$100,000 capital. Directors: Thomas Clark, New York; William R. Harris and William B. Tuttle, Akron, O. Canal Dover, O.—The Standard Motive Power Co., with \$10,000,000 capital. Officers: Howard MacNutt, president; Andrew Wels, vice-president; W. H. Hoar, sections: Thomas Characterists. retary; Thornton Chase, treasurer.



## SERPOLLET'S LETTER

# Deauville's Questioned Times Will be Hard to Offset in Public Minds.

In a letter to English Motoring Illustrated, M. Serpollet, the celebrated designer of the steam vehicles bearing his name, in the matter of the Deauville races, referred to in the Paris letter of the Motor World of last week, says:

"I tell you some news which will cause a considerable stir in the world where record speeds are admired and breathlessly awaited.

"There happened at Deauville a large, a pyramidal, formidable mistake or blunder.

"Everybody noticed that of a sudden the times made by the car competitors became fantastic and well nigh incredible, while the speed at which the cars were apparently travelling did not grow proportionately.

"The mystery is now unravelled. It appears that the chronometer of one of the timekeepers got out of order during the race. There is no doubt that the watches were correct at the start, but at the finish there was the material discrepancy of seven seconds.

"Think of the difference seven seconds makes in the record of one kilometre! You do not need to be a racer to grasp the significance of those seconds. To take Gabriel's time alone, this brings down his accredited 84% miles an hour (one kilometre in 262-5 seconds) to the less epoch-making, world-startling performance of sixty-seven miles an hour (108 kilometres).

"It will be most difficult in the face of the extraordinary speeds which Deauville has indelibly fixed in the popular mind to make the public grasp that a car going at 130 kilometres (about eighty miles) an hour is an extraordinary car. One hundred and fifty kilometres is the standard which this memorable race has stamped on everybody's mind, and nothing short of this will claim or appear to be worthy of attention.

"It will prove a very difficult matter to erase this whirlwind and lightning speed impression as to the pace possible to motor cars. Only by repeated explanations and drumming it into their minds shall we be able to remove the false impressions and the great expectations created by the failure of a chronometer at Deauville.

"Any car which fails to reach the stupendous speed the people have been erroneously led to expect will be condemned as an 'automobile loafer.'"

All the documents relating to the discovery are in the hands of a committee of the Automobile Club of France, and the facts and their deductions are to be officially published in October.

The times that M. Gabriel was supposed to have beaten were those of W. K. Vanderbilt, jr., 29 2-5 seconds, and C. J. Jarrott,

after figures of 27 1-5. The latter time is now known to have been made on a most perceptible down grade and if the Deauville time is counted out that of Vanderbilt's will be the record for the while.

### Who Pleads Guilty?

Somewhere in the United States is a man who is happy, as well he may be, for in some mysterious way he has come into the possession of a brand new \$1,000 automobile through the expenditure of the munificent sum of 10 cents or more. Who this man is, and where he lives, is a profouond mystery. Those who know won't tell, and if they did, the newspapers would be prohibited from publishing the fact under penalty of having the issue excluded from the United States mails.

The trouble all came about because of a raffle that was to be held for a motor vehicle by a lodge of Elks at Jamestown, N. Y. Twenty-five thousand tickets had been sold at 10 cents each when the local Society for the Prevention of Vice stepped in and said that the vehicle must be confiscated and sold for the benefit of the poor fund of the county, according to the law made and provided. The lodge called the raffle off, but in some way that puzzles the inhabitants the vehicle has disappeared from Jamestown.

### Some Good Guessing.

Two members of the Auto Club of France have made a match that will prove of general interest, for it will go to show just how near an expert automobilist can guess the speed at which he is travelling. Each has backed his own ability of estimating various speeds. Accompanied by an umpire, they are to travel between Paris and Cernay in an automobile fitted with a speed indicator. Each competitor will be required at intervals to estimate the speed at which the car is travelling. He will be allowed ten seconds in which to make his calculation, and his reply will be compared with the reading of the speed indicator. The scoring will be done by points. He who guesses within 10 per cent, of the reading will score a point.

### Slow Speeds are Dangerous.

The Pall Mall Gazette voices the general feeling of Great Britain in sounding a note of warning in connection with what it terms the "senseless prejudice against and persecution of motorists." It says:

"Great energy and enterprise are concentrated in France, the United States and Great Britain in the invention of new machinery for rapid travel and it is absurd to permit fanatical, unreasoning opposition to strangle or seriously hamper the big industrial development."

The paper also declares that speed is no test of danger, as a slow machine in unskilled hands is the most dangerous, and it maintains that thirty miles an hour by a skilled driver is a reasonable standard.

## **REASONS FOR COMPLAINT**

# Receipt of his Vehicle Showed Carelessness in Packing and Other Things.

Carelessness in overhauling and shipping goods is responsible for a vast deal of loss in many lines of business. That the automobile trade is far from free of it is shown by the following complaints made by the purchaser of a shopworn car.

"The machine arrived crated at one of the Manhattan piers," he writes to the Motor World. "The float feed carburetter was tied on the angle iron with a piece of twine. The flat steel spring for holding same in place I found, by good luck, in the bottom of the wagon. The mud guards were laid in back of wagon, tied, just as they were taken off, with no provision made to protect them from chafing, with the result that they scratched and marred the back of carriage, besides marring themselves.

"Nut was off front axle, with result that after having been towed a few blocks the retainers were all chewed up, and half the balls lost. The cones were so jammed that it necessitated cutting the front axle to make a repair, as it was too dangerous to spring fork far enough to remove same.

"I purchased the rig for new, but the rear tire had one large and one small indentation which should be vulcanized to avoid being made worse. There was no spark plug or exhaust cam valve, but these were sent to me C. O. D., for which the seller was to pay later on, which he did.

"Batteries were dead, but he'd make no reparation. In subsequent communications, when I made reference to tires, he religiously abstained from making any reference to this subject: he saw no reason why batteries should be made good, as they were O. K. when they were shipped. He volunteered to go halves in getting the wagon in shape, and a few days ago sent check for spark plug exhaust cam valve, and his half of labor (\$2.50) in getting rig in running order.

"A patent screw driver, which is part of the equipment, was lacking, and when I sent bill for same (which I paid—\$1.00), he denied same, stating that he never received a screw driver."

### Race Meeting Called Off.

After a careful inquiry into the desires of the automobilists of Boston and vicinity, the committee of the Massachusetts Automobile Club, which had charge of the proposed race meeting at Readville next month, has decided that no races shall be held under the auspices of the club. The official announcemene that the meeting was off was sent out last Friday, no reason being given except that existing conditions do not warrant holding such an event.





Although deeply annoyed by the zeal of constables and magistrates who have arrested and fined him for scorching, W. K. Vanderbilt, jr., denies that he has given up automobiling and sold his machines, as was reported recently. He adds some pertinent and just criticism of the laws regulating the speed of automobiles in this country, and suggests that if the system of measuring speed by minutes to the mile were to be substituted for the common practice of estimating miles to the hour, the absurdity of the present laws would be apparent to every one.

The authorities of many suburban towns, exasperated by the scorchers, have fixed the maximum legal limit of speed on country roads at ten miles an hour, or a mile in six minutes. The pedestrian record, square walking, is a mile in 6:23 minutes, and ten miles in an hour and a quarter. A man can run twelve miles an hour, and do his twenty miles in less time than is prescribed for motor vehicles. Every tradesman's delivery wagon, even the small boy on a velocipede, makes better time than the automobile is permitted to make.

It is ridiculous to fix such a limit of speed, but the scorchers have only themselves to blame. When the people become more accustomed to the machines, and automobilists show proper consideration for the rights of the public, the restrictions will be made reasonable. Strict enforcement of the law will soon reveal its absurdity, but until the drivers of machines show a disposition to behave like rational persons they probably will be treated as dangerous lunatics, and their protests against the regulations will be unheeded.

The problem will work itself out in due time, and eventually a rate of fifteen or even twenty miles an hour probably will be permitted on suburban roads. As a matter of fact, the rate of ten miles an hour is exceeded on Broad street by automobiles every day in the week without attracting attention.—(Philadelphia North American.

And what is the meaning of the automobile? Briefly it means that complete development of the entire country which without it could not be possible, for it will impel the building of good roads. No country can command its full strength until all its parts are easily accessible, and its people and their common interests are brought into the closest commercial and social union. We know what railroads have done in a general way for the advancement of nations, particu-

larly this nation, which has given right of way to more lines than all the rest of the world. What greater benefits may accrue from the automobile, with good roads everywhere and speedy means of transportation within reach of each individual for himself and the products of his factory or farm, cannot thus early be estimated. The horse will not be entirely eliminated as a factor of industry, but his sphere will be circumscribed, and the automobile will not only do what he attempted to do in the past, but it will do a millionfold more to meet the everincreasing demands of a people growing daily in numbers and wealth and power. The millions of our rural population will be brought into closer relations with the towns and with neighbors, and the loneliness of farm life, which drives so many to the cities, with detriment to all, will no longer retard our agricultural growth, nor prevent a proper distribution of population for the national welfare. That is the meaning of the automobile, and while the statement may be disputed now, it is made with the earnest belief that when to-day's men of fifty have rounded out their lives threescore and ten, it will be fully verified.

The automobile, like many other things, has been made to suffer in public esteem by its fool friends. There is in many quarters an impression that it is a death dealing terror, though there have been fewer fatalities attributable to it than to the folding bed. The kerosene lamp was the cause of many horrible deaths when it was a new thing, but it is in working harness now. and casualties resulting from its use are few and far between. It is not difficult to imagine that the automobile will become as common and as harmless as the kerosene lamp. There were several occasions during the Jahrmarkt, last week, when the intersection of National-ave. and Grove-st. was alive with automobiles. They moved about among vehicles and pedestrians without an accident. Indeed, there have been very few serious accidents from the use of automobiles in Milwaukee, although a large number of those vehicles are owned in the city and are to be seen upon the streets every day. Now and then an automobile gets out of order. Now and then a horse runs away. Now and then a man loses a finger in a buzzsaw. But horses are not interdicted, and buzz-saws continue in use, and automobiles have undoubtedly come to stay.-(Outing.

Autophobia appears upon diagnosis to proceed from a strong distaste to horseless locomotion on the rural highway by those who live in cities. That is the root of the disease. In its earlier and milder form this objection is comparatively harmless, but as the malady becomes more acute the patient frequently becomes violent and takes to the pike with murderous intent. He seems possessed of the delusion that he has a mission to destroy all automobiles and slaughter the automobilist. Age nor sex nor previous condition is exempt from this mania.

A still later and more serious type of the

disease is known as autophobia legalis. It has broken out in New-Jersey, where the trusts come from, and where human nature wears more variegated guises than in any other part of the known world. In the legal type of autophobia, guile and a sort of insane craft take the place of violence. The patient is possessed of a mania to compass the destruction of the automobile, or at least its obliteration from the landscape, under the forms of the law. An especially virulent case of autophobia legalis has developed in the person of a freeholder of Middlesex County, who has drafted a law to bar the automobile from the public highways except between the hours of 10 o'clock a. m. and 4 o'clock p. m. The patient was sequestered. but not, it is feared, until a large number of his neighbors had been exposed. The contagious character of autophobia is one of its most alarming incidents. The disease has often been known to run through an entire community before it could be checked. Very few ruralists are immune.

The practical question is, of course, how to treat the disease when there is no longer time to prevent its infection. Generally speaking, most of the rural population of this and the contiguous States have been exposed to contagion. The most efficacious treatment thus far suggested is psychical rather than physical. Cure must be by suggestion and purging the mind of delusions. Of these latter, the most frequent and perhaps the most dangerous is the delusion that the horseless carriage is in itself an enemy to civilization, a menace to the public prosperity and happiness. Strange as it seems, a large proportion of our country neighbors are completely possessed with this absurd but dangerous idea. Some of them are beyond hope of cure, but in the milder cases it ought still to be possible to destroy the delusion and establish in its place the perfectly obvious and rational proposition that the horseless vehicle is a benefit to the entire community and especially to the farmer and villager. It should be pointed out to the patient, gently but firmly, that any device which sends the city man into the country money in pocket is pretty sure to benefit the countrymen. Your automobilist necessarily has money; necessarily he spends it along his route, leaving a trail of gold in his wake. The countryman gets a good share of this, especially the countryman who has the wit and energy to minister to the automobilist's requirements, instead of making his road a hard one to travel by annoving restrictions and surly behavior. It is even possible that the automobile carries with it the solution of the "good roads" problem. The farmer either cannot or will not make good roads himself; the automobolist may do it for him and give him the lion's share of the benefit.

This is only a suggestion, but it is along some such lines as this that the cure must be sought for a distressing and even dangerous epidemic. The farmer can still be cured of autophobia, but there is no time to lose.—Daily America.



### THAT L. A. W. ORDINANCE

## Full Text of the Grossly Discriminating Measure -Even Lamps Must be Approved.

Possibly because they have a fight for reelection on their hands and need campaign material the members of the executive committee of the New York Division of the League of American Wheelmen have suddenly aroused themselves from the comatose condition which has marked their organization for the past several years. In the awakening, which takes the form of an ordinance that would require automobilists to be examined and licensed, they have been assisted by a little known lawyer named Thompson, who, without cost, has obtained some valuable advertising and whose efforts to be sarcastic at the expense of automobilists are distinctily amusing.

While the latter are disposed to resent the source of the proposed measure, several of the more prominent have, despite the gross discrimination which they would effect, placed themselves on record as at least qualifiedly favoring the requirements.

The ordinance, which is in the hands of the Aldermanic Law Committee, is as follows:

An Ordinance to license persons operating automobiles, locomobiles and similar vehicles in the City of New York.

BE IT ORDAINED by the Board of Aldermen of the City of New York as follows:

Section 1. No person shall hereafter operate any automobile, locomobile, motor vehicle, or other similar vehicle, whether the motive power thereof be electricity, steam, gas, gasoline, oil, naphtha or other similar source of energy, and whether used as public hack, truck, or for hire, or for private pleasure or business, until such person has first obtained a license to operate the same.

whether used as public hack, truck, or for fire, or for private pleasure or business, until such person has first obtained a license to operate the same.

Sec. 2. The Mayor shall designate three persons having sufficient knowledge of the subject to intelligently act thereon, who shall hold office for two years and who shall be known as a Board of Examiners of Automobile Operators, and whose duty it shall be to carefully examine every applicant for a license to operate any vehicle referred to in Section I hereof, as to such person's general and special fitness to operate such vehicle, and to make their written report to the Mayor on such application, with their recommendation thereon. The compensation of the members of said Board shall be fixed by the order of appointment. The Mayor shall have the power to remove such appointees, or any of them, at any time at his pleasure, and shall have the power and it is hereby made his duty to appoint successors to the term for which they were appointed. Said Board may adopt and enforce such rules and regulations for the performance of the duties imposed upon it as it shall deem necessary and shall hold stated meetings at some convenient place in said city to be designated and provided for that purpose by the chief of the Bureau of Licenses, said place to be located in one of the public buildings of said city; if possible, in the City Hall. They shall keep an accurate record of all their proceedings; they shall have a person now in the employ of said city to be assigned by the Mayor to act as secretary of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Board; and the salaries of the members of said Bo

board of examiners, who shall as soon as convenient appoint a time and place for hearing thereon, and the secretary of said Board shall at once notify the applicant thereof. The applicant shall personally appear before the said Board at the time designated or at any other time to which such hearing shall be adjourned, and shall submit to such examination by said Board as it shall prescribe. The Board in its report shall state whether the application is approved or rejected, and if rejected, the reason therefor. Buch report shall forthwith be forwarded to the Mayor for approval or rejection. If approved, and if the report is in favor of granting the license, the Bureau of Licenses shall, on compliance by the applicant with the license, which shall be good for one year from its date unless sooner suspended or revoked as herein otherwise provided for. If the report of the Board be against granting the license, and if such report is approved, no license shall be granted on such application. If the Mayor shall disapprove such report rejecting said application the same shall go back to the Board of Examiners for further hearing.

Sec. 4. All licenses issued under the provisions of this ordinance shall be by authority of the Mayor of the City of New York, and shall be issued by the Bureau of Licenses, but only after the requirements of Sections 3, 5, and 7 of this ordinance are compiled with. Such licenses shall be good for one year from the date thereof, unless sooner revoked or suspended, either with or without further examination of the licensee, as the said Board of Examiners may determine, on payment to the Bureau of Licenses of one-half the sum paid therefor for the first year. The Mayor shall have power, after a hearing, for any of the causes specified in Section 8 hereof, or for any other cause sufficient to him and materially affecting the safety or wellbeing of persons using the streets, avenues, roads, alleys, lanes, boulevards, highways, concourses, parks, parkways or other public places within said city,

duce and exhibit the same whenever required so to do by any police officer or magistrate of said city.

Sec. 5. Licenses issued hereunder shall contain the name and address of the person in whose favor issued, the kind of vehicle to be operated thereunder, with a sufficiently definite description thereof, and shall otherwise be in such form as may be prescribed by the said Board of Examiners of Automobile Operators, and shall be numbered and registered by and with the Bureau of Licenses with the full name and address of the person to whom issued, with the number thereof, in a book to be provided for that purpose, which book shall be open to inspection by the public during office hours. Every person to whom any license is issued, before attempting to operate any such vehicle thereunder, shall cause the vehicle mentioned therein to be equipped with two suitable lamps, to be approved by the Mayor or by the chief of the said Bureau of Licenses, one to be carried forward on each side of such vehicle, and shall have securely fastened across the middle of the outside of each lamp a metal band not less than two inches in width, out of which the official numbers of such license shall be cut after the manner of a stencil plate. The component figures of such numbers shall not be less than one and one-half inches in height, and of a style to be approved by the Mayor or by the chief of the said Bureau of Licenses, and said number shall be so placed as to be easily seen from either side of such vehicle by day as well as by night, and such lamps shall be kept brightly burning from one-half hour after sunset as long as said vehicle is used at night.

Sec. 6. It shall be sufficient cause for suspending or revoking such license that the person to whom it has been issued has violated any law, ordinance, regulation or resolution of said city or any department thereof, in regard to the rate of speed at which such vehicles as are affected by this ordinance are permitted to be operated or run; or has wilfully violated any other law,

gently permitting or allowing any such vehicle owned or controlled by such licensee to stand or remain unattended on any such public places; or refusing on demand to exhibit or display to any police officer or magistrate of said city his license obtained hereunder.

Sec. 7. The fee to be paid for licenses under this ordinance shall be as follows: For any vehicle affected by the provision hereof operated as a public hack, cab, coach or truck, or for hire, if intended to carry one or two persons, three dollars; if intended to carry more than two persons, five dollars. For any such vehicle operated for private use, either for business or pleasure, ten dollars.

Sec. 8. Any person operating or attempting to operate any vehicle covered by the provisions of this ordinance on any of the streets, avenues, roads, alleys, lanes, boulevards, highways, concourses, parks, parkways or other public places within said City of New York without first obtaining a license so to do, or violating any of the other provisions or requirements of this ordinance, shall for each offense be fined not less than ten dollars nor more than fifty dollars, or shall be imprisoned not less than two days nor more than ten days, or shall suffer both fine and imprisonment.

Sec. 9. Nothing herein contained shall be construed to apply to any vehicle propelled by horse power, or by human energy, nor to any street car, by whatever motive power propelled, nor to any elevated or steam railroad or railway car or the engine or other motive power used to propel the same; nor to any vehicle mentioned in Section 1 hereof, owned or employed by the City of New York or by the Government of the United States, or by any regularly constituted hospital in said City of New York.

Sec. 10. All ordinances or parts of ordinances inconsistent or in conflict with the provisions of this ordinance are hereby repealed. Provided, that in a case when the operator of any vehicle referred to in Section 1 hereof, operated as a public hack, cab, coach, truck or other vehicle used f

### Mixed in His Statements.

In discussing the recently passed ordinance in Newark, N. J., the chairman of the street committee is credited with the following original opinion on the managability of horses and clouded statement of who or what is to be protected:

"The reason a distinction was made between a horse and an automobile was that a man can generally manage a horse in the street, but few can manage an automobile safely," and he was glad to be able to make a heavy fine on drivers of automobiles for fast riding on the public streets, in order to protect the pedestrians in the streets from accident and, perhaps, death."

### Avoiding Personal Liability.

The directors of the Long Island Highway Protective Society held their first meeting on Wednesday of last week at 60 Pine street, Manhattan, and elected the following officers for the ensuing year: Charles W. Wetmore, president; Robert W. De Forest, vice-president; W. Emlen Roosevelt, treasurer, and Townsend Scudder, secretary and counsel, Offices have been opened at 7 Pine street.

About the only force some chauffeurs have is the force of habit.



# LIKE COMIC OPERA

# Ludicrous Methods Employed by Long Island Association.

Following closely the triumph in the May case at Southampton comes the victory in the Guthrie case at Oyster Bay last Saturday, for alleged exceeding of the speed limit. The trial disclosed methods employed by the Long Island Highway Protection Association that would do credit to an oldtime comic opera of the Gilbert-Sullivan type.

The association employs twelve special constables, divided into squads of four, placing them in different parts of Nassau County, where the most of their time is taken up in sitting around killing time and swapping stories while waiting for the occasional automobile. In several instances their zeal has overreached discretion, and they have had to offer profuse apologies. In these cases the men behind the movement have safeguarded against individual damages by incorporating.

Sequestered sections flanked by woods are selected and three posts are set up an eighth of a mile apart. Concealed in the woods opposite each post is stationed a deputy sheriff. By a crude system of signals, consisting of an ordinary string supported from tree to tree and reaching over the length of the measured course, with a sleigh bell and tin can attached at the distant end, the deputies signal to one another and take time on the unwary automobilist.

Mr. Guthrie showed to the court by the evidence of expert witnesses that, by actual tests of this string signal as compared with the time taken by the accurate electrical timers usually used in timing automobiles, there was an error of three to four seconds in the eighth of a mile. The string, owing to its sagging and friction as it passed from tree to tree, failed to ring the bell at the distant end until the automobile had already been on its way down the course three or four seconds. As the deputy's watch at the end of the course was not started until he received the signal, and was stopped as the automobile crossed the line, the automobile was credited with having covered the course in three or four seconds less time than it actually used, which figured out a rate of speed much in excess of the actual.

The court held that the accuracy of the timing of the deputies was in question, and the defendant was acquitted.

## Comparison not Good.

One of the arguments frequently used against allowing the average citizen to handle an outomobile is that as an engine driver very often has had from ten to fifteen years' experience as a fireman before taking charge of a locomotive, the automobilist ought to also go through a long course of training. There is something in this theoretically, but,

as a prominent engineer points out, the cases are widely different. The locomotive is a far more complicated and a much more powerful machine—sometimes of 1,000 horse power—and the road has to be learned with regard to every signal, curve and junction over practically 1,000 miles of railway. In addition to this, there are often from 300 to 600 passengers in the train. The presence of rails, while it gives security in one sense, prevents, however, any deviation in the event of imminent collision.

### Flexible Reachless Gear.

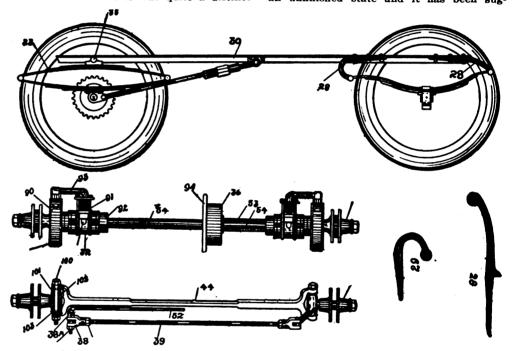
With the growing popularity of the flexible, reachless running gear with angle iron framing, it is worthy of note that A. L. Dyke, of St. Louis, Mo., placed on the market two years ago a running gear of this kind. At that time it was quite a distinct

## LOOKING FORWARD

# Automobilists may yet Take Rank With More Favored Citizens.

It is pretty safe to say that the automobiles owned in New York City outrank in value the fast horses used for speedway driving. The latter have a magnificent concourse built for their use along the Harlem River and it is only reasonable to expect that the former should be equally treated in this respect.

In the Borough of the Bronx, this city, and connecting the Bronx and Pelham Parks, is a boulevard stretch over two miles in length and 400 feet in width. This parkway is in an unfinished state and it has been sug-



type, the tubular frame holding the premier position.

The Dyke gear as sold to-day is shown herewith in detail. The angle iron is shown at 30, with the front spring hangers at 28 and 29. The flexible joint or bearing for the rear springs is shown at 35. Front and rear axles have artillery hubs. The rear hubs have the brakebands cast on them. The differential is placed at any point on the rear axle. The front spring hanger forgings are shown separately in figures 28 and 29.

### The Week's Exports.

Cuba-1 case auto vehicle parts, \$50. Liverpool-2 cases auto vehicles and parts, \$9.880.

London—16 cases motor vehicles and parts, \$5,278.

Mexico—6 cases auto vehicles and material, \$442.

Newfoundland-1 auto car, \$210.

New-Zealand—2 cases auto vehicles, \$1,500. Rotterdam—1 case motor vehicles, \$1,150.

gested that owing to its liberal width, provision could easily be made for an automobile speedway.

Allowing a good stretch of road on which to get a vehicle in motion, a straightaway of two miles would permit a mile on which competition would be possible for all vehicles, including those of the highest horse-power.

Depressed to a limited degree, so that spectators along the course would be protected from any possible results of the speeding, such a course would be ideal, for the construction could be accomplished in such manner as to make unnecessary any crossings at grade.

Park Commissioner Eustis, of the Borough of the Bronx, is credited with being in favor of an automobile speedway, and believes that its location in his part of the city is not only possible, but that there is nothing unreasonable in a request of the sort.

Unfortunately, money is not available at the present time to improve the Bronx parks at the rate desired, and nothing could be spared from the allowance now granted,



### The Week's Patents.

708.952. Pneumatic tire and process of manufacturing same. John W. Blodgett, Chicago, Ill., assignor, by direct and mesne assignments, to N. Tire Co., Chicago, Ill., a corporation of Illinois. Filed Mar. 18, 1901. Serial No. 51,579. (No model.)

Claim.—1. As a new article of manufacture, a pneumatic tire having the tube knit fabric embedded therein and its ends brought together and secured without overlapping by uniting the loops forming the ends of the tube; substantially as described.

708,953. Pneumatic tire and process of manufacturing same. John W. Blodgett, Chicago, Ill., assignor, by direct and mesne assignments to N. Tire Co., Chicago, Ill., a corporation of Illinois. Filed Jan. 9, 1902. Serial No. 88,999. (No model.)

Claim.—1. As a new article of manufacture, a pneumatic tire having a tube kult fabric embedded therein and its ends brought together and overlapped and secured by uniting the loops of the telescoped end with the adjacent loops of the inner portion; substantially as described.

708,954. Tire and method of manufacturing same. John W. Blodgett, Chicago, Ill., assignor, by direct and mesne assignments, to N. Tire Co., Chicago, Ill., corporation of Illinois. Filed Jan. 9, 1902. Serial No. 89,000. (No model.)

Claim.—1. As a new article of manufacture, a pneumatic tire having a tube of knit fabric embedded therein and its ends brought together and secured by uniting the loops of the ends and having the valve stem passing through the fabric between the ends; substantially as described.

708,960. Method of controlling electric electric motors. John C. Henry, Denver, Col.; Susie A. Henry, executrix of said John C. Henry, deceased, assignor to Stanley Electric Manufacturing Company, a corporation of New Jersey. Filed June 3, 1899. Serial No. 719,264. (No model.)

Claim.—1. A method of starting a pair of motors consisting of first placing them in parallel in opposite relation to each other, each armature being in series with the corresponding field and cross connecting them so that each armature is in shunt with the field of the other motor.

708,961. Method of controlling electric motors. John C. Henry, Denver, Col.; Susie A. Henry, executrix of said John C. Henry, deceased, assignor to Stanley Electric Mfg. Co., a corporation of New Jersey. Filed April 1, 1901. Serial No. 54,001. (No model.)

Claim.—1. The method of controlling a plurality of electric motors, whose fields are excited by a circuit independent of the armature, which consists in starting with the armatures in series and the fields in parallel and speeding up by changing the fields to series without breaking their circuit.

708,967. Machine for smoothing rubber vehicle tires. Stephen S. Miller and Lee E. Clough, Akron, Ohio. Filed May 14, 1902. Serial No. 107,374. (No model.)

Claim.—1. In a machine of the class designated the combination of a supporting table, feeding guide rolls mounted on said table to force said tire lengthwise along said table, excising means mounted above and below said table placed to engage said passing tires, substantially as shown and described.

708,997. Tire for Vehicle-Wheels. Mansion C. Carter, Hearne, Tex. Filed May 12, 1902. Serial No. 106,991. (No model.)

Claim.—1. In a wheel, the combination with felly sections, of tubular tire sections receiving the felly sections and detachably connected at their ends, substantially as and for the purpose described.

2. In a wheel, the combination with felly sections, of the tubular tire sections surrounding and reinforcing the felly sections and provided with projecting overlapping tongues, and fastening devices passing through the tongues and through the adjacent sections, substantially as described.

3. In a wheel, the combination with felly sections, of the tubular tire sections surrounding the felly sections and forming a continuous tread and provided at the inner faces of the felly sections with openings, substantially as described.

709,006. Steam Generator or Water Heater. Bernard A. Guerink, Cleveland, Ohio. Filed April 7, 1902. Serial No. 101,734. (No model.)

Claim.-1. A heater of the character indicated, comprising several sections arranged at different elevations respectively, and each section provided with an induction port or fluid inlet arranged at the bottom and centrally of the section and an upwardly discharging eduction port or fluid outlet arranged at the top and centrally of the section, and each section, except the lowermost section, communicating, at its induction port. with the eduction port of the section next below, and each section also having the following: a lower sloping passageway, an upper sloping passageway and two intermediate sloping passageways, with the lower passageway and the upper passageway arranged at opposite sides, respectively of the ports of the said section, with the lower passageway extending laterally outwardly and upwardly from the induction port, with the upper passageway arranged a suitable distance above the upper end of the lower passageway and extending laterally outwardly and downwardly from the eduction port, and with the two intermediate passageways arranged at opposite sides respectively of the lower and upper passageways and connecting the upper end of the lower passageway with the lower end of the upper passageway and gradually sloping upwardly from the lower passageway.

709,042. Steam Generator or Water Heater. Charles M. Raymond, Cleveland, Ohio, assignor of one-half to Louis E. Hoffman, Cleveland, Ohio. Filed March 17, 1902. Serial No. 98,587. (No model.)

Claim.-1. A steam generator or heater of the character indicated, comprising pairs of helical pipe sections arranged, respectively, in a horizontal or approximately horizontal plane and at short intervals vertically, which pipe system has two sections of each pair of helical sections arranged one above the other and corresponding or approximately corresponding with each other in dimensions and number of coils and communicating with each other at their outermost coils and having their innermost coils provided, respectively, with an upward extension projecting upwardly; a pipe arranged to conduct fluid from the pipe system and connected and communicating with the innermost coil of the upper section of the lowermost pair of helical pipe sections, a fluid supply pipe connected and communicating with the upward extension of the innermost coil of the lower section of the uppermost pair of helical pipe sections, and a connection between the upward extension of the innermost coil of the lower section of each remaining pair of helical pipe sections and the upward extension of the innermost coil of the upper section of the pair of helical pipe sections next above, substantially as and for the purpose set forth.

709,115. Generation of Motive Power. Sigmund A. Rosenthal, London, England. Filed Dec. 21, 1901. Serial No. 86,844. (No model.)

Claim.—1. A compound liquid for use in steam generation, consisting in combination, of water together with from .1 to .2 per cent. of a liquid of low boiling point, high vapor tension, and low latent heat of vaporization, substantially as described.

2. A compound liquid for use in steam generation consisting in combination of water together with from .1 to .2 per cent. of acetone, substantially as described.

709,124. Brake Mechanism for Motor Vehicles. John Unser, Carthage, N. Y., assignor of one-half to William W. Hawes, Clayton, N. Y. Filed March 8, 1901. Serial No. 50,329. (No model.)

Claim.—1. In a brake mechanism for motor vehicles provided with a steam boiler, a condenser coil communicating with the boiler, brakes and a brake operating piston actuated by fluid from said condenser coil.

2. In a brake mechanism for motor vehicles, a steam boiler, a condenser coil communicating with the steam space of said boiler a brake arranged to engage the wheel of said vehicle and a brake operating piston arranged to be actuated by fluid from said condenser coil.

709,125. Brake Mechanism for Motor Vehicles. John Unser, Carthage, N. Y., assignor of one-half to William W. Hawes, Clayton, N. Y. Filed Oct. 31, 1901. Serial No. 80,622. (No model.)

Claim.-1. In a brake mechanism for motor vehicles, a steam boiler, a water tank, a condenser worm in said water tank connected with the steam space of said boiler, a storage chamber formed at the lower end of said worm, a brake cylinder mounted on the frame of said vehicle, a valve casing formed on said cylinder and communicating with the interior of the same, with said storage chamber and with said water tank, a spring actuated piston in said cylinder, an equalizer loosely connected with said piston, brake arms connected to said equalizer by brake links, brake cones secured to the outer end of said brake arms, brake wheels mounted between said brake cones to engage the wheels of the vehicle, a spring pressed threeway valve in said valve casing, a brake handle connected to said valve to admit con-densed steam from said storage chamber into said cylinder to actuate the brake and to discharge the water from said cylinder into said tank and a locking piece secured to said brake handle to maintain said brake in operative position.

709,126. Vaporizing Device for Explosive Engines. Benjamin C. Vanduzen, Winton Place, Ohio. Filed July 13, 1896. Serial No. 598,958. (No model.)
Claim.—1. The combination of the mixing

Claim.—1. The combination of the mixing chamber piston in chamber or guideway stop below the piston, valve gasolene inlet conduit constricted, and conical valve for regulating the passage of gasolene through the conduit and having a conical seat in the said conduit pipe, springs having one branch connected to the piston and one branch to a fixed point as substantially as and for the purposes specified.

2. The combination of the mixing chamber piston in chamber or guideway stop below the piston, valve, gasolene conduit constricted and valve for regulating the passage of gasolene through the conduit and springs having one branch connected to and slidable through the extension of the piston, and the other branch connected to a stationary stud, and having an opening through which the

other branch of the spring is slidable, and set screw for setting the adjustment of the spring, substantially as and for the purposes specified.

709,157. Jar for Storage Batteries. Patrick Kennedy, Brooklyn, N. Y. Filed Jan. 6, 1902. Serial No. 88,598. (No model.)

Claim.—1. A jar for a storage battery having side guards of soft cushion-like material to serve as buffers to keep the place or elements out of contact with sides of the receptacle.

2. A jar for a storage battery having a soft rubber lining and having side guards of soft cushi n-like material to serve as buffers to keep the plates or elements out of contact with said lining.

3. A jar for a storage battery having an integral, soft rubber lining provided with side guards of the same material projecting from its inner surface, substantially as and for the purpose set forth.

709,206. Ball-Bearing. Harley Cogswell, Lakeview, Mich. Filed Oct. 9, 1901. Serial No. 78,114. (No model.)

Claim.-A ball-bearing for vehicles, comprising an axle having a shoulder and a convexed shoulder adjacent thereto, combined with a sleeve having a flanged end and a concaved shoulder in the wall of its bore adjacent to said flange, said flange and con-caved shoulder designed to contact with the shoulders, a hub having annual flanges which are flat on their outer faces, bearing rings, about said sleeve and interposed between one of said flanges and flange, the bearing ring in contact with the outer of said flanges, a bearing ring having its bore threaded a portion of its length and engaging the threads about the outer portion of the axle, the inner face of said bearing ring having a concaved bearing shoulder, balls interposed between said bearing rings, a threaded ring also fitted on the threaded circumference of the axle and abutting against the outer face of said ring, the inner end of the hub extending over said rings and flange, and dust caps, with interiorly threaded flanges fitted over threaded portions of the circumference of the hub at the ends thereof and abutted against shoulders thereon, as set forth.

709,280. Pneumatic Tire. Irvin Teunant, Springfield, Ohio. Filed August 11, 1902. Serial No. 119,175. (No model.)

Claim.—1. A pneumatic tire comprising a tubular body having a thickened tread lateral inwardly arched diaphragms, forming lateral protective chambers, and a central chamber for compressed air. fillings of sponge rubber located in said lateral protective chambers, and a metallic protective strip located in the tread and of a width greater than the exposed portion of the central air chamber, substantially as described.

709,322. Roller Bearing. Albert E. Henderson, Toronto, Canada, assignor to the Toronto Roller Bearing Company, Limited, Toronto, Canada, a Corporation of Ontario. Filed July 20, 1901. Serial No. 69,151. (No model.)

Claim.—1. An antifriction bearing, comprising two sets of bearing elements, one set of said elements having conical recesses and the other set having projecting tapering mandrels terminating in abruptly conical points journaled in and of lesser diameters than the conical recesses.

2. In a roller bearing, the combination of the external sleeve having internal annular flanges, an axle having peripheral flanges, antifriction rollers contained between the axle and external sleeve, tapering mandrels for the ends of the rollers terminating abruptly in conical ends, bearing rings loosely encircling the axle, having conical recesses of greater diameters than and in which are contained the conical ends of the axle and into the ends of the external sleeve to prevent the outward displacement of the rollers, substantially as set forth.

709,375. Wheel Hub. Horace N. Thayer, Erie, Pa. Filed July 5, 1902. Serial No. 114,453. (No model.)

Claim.—1. The combination in a wheel hub of a central thimble, inwardly beaded and outwardly flanged collars with spoke openings therein on said thimble, and an outer shell or covering between said collars held in place by the beads thereon, substantially as set forth.

2. The combination in a wheel hub, of a central thimble, inwardly beaded and outwardly flanged toothed collars thereon having spoke openings therein, spokes in the openings of said collars extending through both collars and turned outward between the teeth thereon, a tubular shell between said collars covering the spokes and thimble, and a cap on the outer end of the hub secured in place by turning inward the teeth on the outer hub collar, substantially as and for the purpose set forth.

709.416. Cooling and Condensing Apparatus. Wilhelm A. Mayback, Cannstadt, Germany, assignor to Daimler Manufacturing Company, New-York, N. Y., a Corporation of New York, Filed March 28, 1901. Serial No. 53,341. (No model.)

Claim.—1. The combination of a frame having screens at each end formed by wires crossing each other and tubes extending from one screen to the other, said tubes being secured to the wires and forming a chamber for the fluid to be cooled, substantially as described.

2. The combination of a frame having an inlet pipe at one end, and an outlet pipe at the other end, a series of wires crossing each other at each end of the frame forming supports, with prismatically shaped tubes extending from one side of the frame to the other and separated by the wires, the wires spacing the tubes so as to form narrow channels for the passage of fluid through the apparatus, substantially as described.

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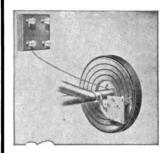
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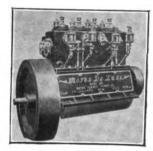


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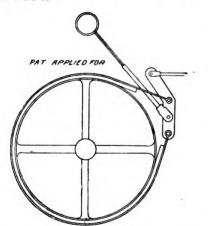
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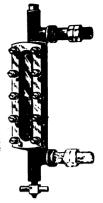
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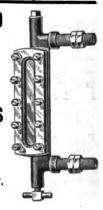
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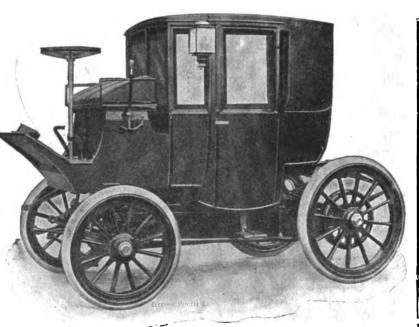


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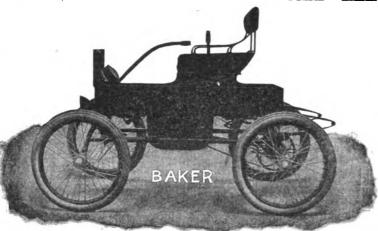
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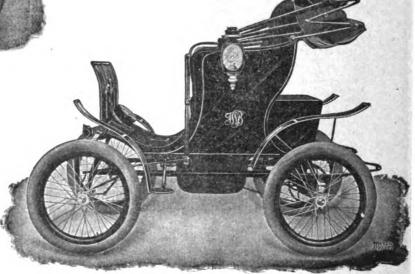
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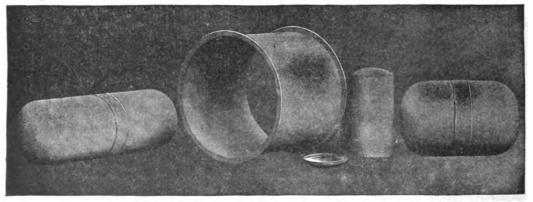
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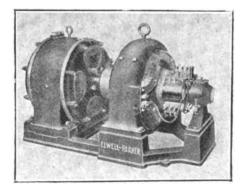
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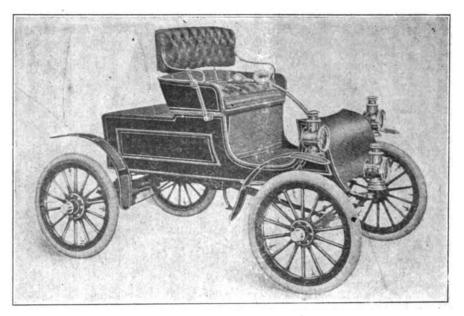
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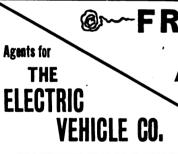
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